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U.S. Department of Agriculture

Answered

United States Department of Agriculture,

WASHINGTON, D. C., January 31, 1914.

MONTHLY LIST OF PUBLICATIONS.

[JANUARY, 1914.]

NOTE.—Copies of any of the publications listed herein, except the *Journal of Agricultural Research* and separates therefrom and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts. The edition of many of the publications is necessarily limited, and when same is exhausted applicants are respectfully referred to the superintendent of documents, Government Printing Office, Washington, D. C., who, under the provisions of the joint resolution of March 28, 1904, is empowered to have reprints made and sell them at the prices herein given. Do not apply to the superintendent of documents for publications without sending the price of same, as he does not distribute them except by sale. The price of any document, unless otherwise noted, is 5 cents.

The Department of Agriculture does not distribute or control the distribution of the publications of other departments of the Government, of the State boards of agriculture, or of the State agricultural experiment stations.

SERIALS.

Journal of Agricultural Research. Vol. 1. No. 4. January, 1914. Contents: Environmental Influences on the Physical and Chemical Characteristics of Wheat. By J. A. LeClerc and P. A. Yoder.—A Drought Resistant Adaptation in Seedlings of Hopi Maize. By G. N. Collins.—Some Diseases of Pecans. By Frederick V. Rand.—A Twig Blight of *Quercus Prinus* and Related Species. By Della E. Ingram.—New Potato Weevils from Andean South America. By W. Dwight Pierce.—An Undescribed Species of *Gymnosporangium* from Japan. By W. H. Long. Pp. 275-356, pls. 29-41, figs. 20. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The superintendent of documents will receive subscriptions for this publication, the price being \$2.50 per volume of 12 numbers.

Experiment Station Record, Vol. XXIX, No. 7, November, 1913. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The superintendent of documents has fixed the price of this serial, which is now issued in two volumes a year, nine numbers each, at \$1 a volume.

BULLETINS.

Forest Management of Loblolly Pine in Delaware, Maryland, and Virginia. By W. D. Sterrett, Forest Examiner. Pp. 59, pls. 5, fig. 1. Contribution from the Forest Service. Jan. 23, 1914. (Department Bulletin 11.) Price, 15 cents.

Aims to show the financial possibilities in growing loblolly pine in Maryland, Delaware, and Virginia, and describes the best methods of management.

The Grape Leafhopper in the Lake Erie Valley. By Fred Johnson, Agent and Expert. Pp. 47, pls. 3, figs. 13. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 24, 1914. (Department Bulletin 19.) Price, 10 cents.

A technical bulletin on an insect destructive to vineyards in the Lake Erie Valley. Remedies and methods of control are recommended.

The Commercial Fattening of Poultry. By Alfred R. Lee, Junior Animal Husbandman, Animal Husbandry Division. Pp. 55, pls. 5. Contribution from the Bureau of Animal Industry, Jan. 15, 1914. (Department Bulletin 21.) Price, 10 cents.

Of interest to those engaged in the commercial fattening of poultry as practiced in the large poultry packing houses of the Middle West. Consists principally of statistical data of the various feeds fed, the cost, methods of feeding, and results obtained.

Cottonwood in the Mississippi Valley. By A. W. Williamson, Forest Examiner. Pp. 62, pls. 6, figs. 2. Contribution from the Forest Service. Dec. 31, 1913. (Department Bulletin 24.) Price, 10 cents.

Demonstrates the practicability of forest management of cottonwood and the utilization of overflowed land. Of value to land owners of the Mississippi Valley especially.

Range Improvement by Deferred and Rotation Grazing. By Arthur W. Sampson, Plant Ecologist. Pp. 16, pls. 5. Contribution from the Forest Service. Dec. 31, 1913. (Department Bulletin 34.) Price, 5 cents.

A method of restoring the range by deferring grazing until after vegetation has produced seed. Popularly written. Of interest to grazers and range managers in the west.

Factors Governing the Successful Storage of California Table Grapes. By A. V. Stubenrauch, Pomologist and Horticulturist, and C. W. Mann, Assistant Pomologist in Fruit-Transportation and Storage Investigations. Pp. 31, pls. 8, figs. 7. Contribution from the Bureau of Plant Industry. Dec. 31, 1913. (Department Bulletin 35.) Price, 10 cents.

Discusses the results obtained through experiments to determine methods for the successful storing, packing, and marketing of California table grapes. The value of redwood sawdust as packing material is demonstrated.

Experiments with Wheat, Oats, and Barley in South Dakota. By Manley Champlin, Collaborator and Scientific Assistant, Office of Cereal Investigations, and Assistant Agronomist, South Dakota Agricultural Experiment Station. Pp. 37, figs. 11. Contribution from the Bureau of Plant Industry. Jan. 20, 1914. (Department Bulletin 39.) Price, 10 cents.

An account of cooperative experiments carried on by the South Dakota Agricultural Experiment Station and the Office of Cereal Investigations of this Department; it is of interest to residents of South Dakota, North Dakota, Wyoming, Nebraska, and Montana.

The Mosaic Disease of Tobacco. By H. A. Allard, Assistant Physiologist, Tobacco and Plant-Nutrition Investigations. Pp. 33, pls. 7. Contribution from the Bureau of Plant Industry. Jan. 15, 1914. (Department Bulletin 40.) Price, 10 cents.

Technical account of recent studies. Valuable to investigators of tobacco diseases.

A Farm-Management Survey of Three Representative Areas in Indiana, Illinois, and Iowa. By E. H. Thomson, Agriculturist, and H. M. Dixon, Scientific Assistant, Office of Farm Management. Pp. 42, figs. 10. Contribution from the Bureau of Plant Industry. Jan. 14, 1914. (Department Bulletin 41.) Price, 10 cents.

Embodies conclusions reached after a study of farm management conditions in three selected areas of the middle west. Instructive for farmers in all sections of the United States.

The Cost of Raising a Dairy Cow. By C. Morris Bennett, Assistant Agriculturist, and Morton O. Cooper, Scientific Assistant, Office of Farm Management. Pp. 23, figs. 6. Contribution from the Bureau of Plant Industry. Jan. 14, 1914. (Department Bulletin 49.) Price, 5 cents.

Of great interest to dairymen everywhere. Gives the actual cost of raising heifer calves from birth to 2-year-olds as determined at a Wisconsin dairy farm for a period covering five years, during which the costs of raising 117 Jersey calves were accurately kept.

Possible Agricultural Development in Alaska. By Levi Chubbuck, Agriculturist, Office of Farm Management. Pp. 31, figs. 12. Contribution from the Bureau of Plant Industry. Jan. 8, 1914. (Department Bulletin 50.) Price, 10 cents.

The outlook for Agriculture in Alaska is shown; interesting to inhabitants of the Northwest.

The Anthracnose of the Mango in Florida. By S. M. McMurran, Assistant Pathologist, Fruit-Disease Investigations. Pp. 15, pls. 4, figs. 4. Contribution from the Bureau of Plant Industry. Jan. 24, 1914. (Department Bulletin 52.) Price, 10 cents.

A study of a fungous disease of the mango and of interest to fruit growers in subtropical regions.

Object-Lesson and Experimental Roads, and Bridge Construction, 1912-13. Pp. 34. Contribution from the Office of Public Roads. Dec. 31, 1913. (Department Bulletin 53.) Price, 5 cents.

Contains a detailed report of object-lesson roads constructed during the fiscal year 1912-13, and a brief account of experimental roads and bridges. Gives statistical data of the work involved, materials used, cost, etc., of roads as follows: One bituminous-concrete, 1 bituminous-macadam, 7 macadam, 4 gravel, 1 gravel-macadam, 1 brick-cinder, 14 sand-clay, 1 sand-gumbo, 3 shell, and 9 earth.

A Special Flask for the Rapid Determination of Water in Flour and Meal. By John H. Cox, Assistant in Grain Standardization. Pp. 7, figs. 7. Contribution from the Bureau of Plant Industry. Jan. 28, 1914. (Department Bulletin 56.) Price, 5 cents.

Simple description and practical directions. Of interest to the flour and grain trade.

The Tobacco Splitworm. By A. C. Morgan and S. E. Crumb, of Southern Field Crop Insect Investigations. Pp. 7. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 19, 1914. (Department Bulletin 59.) Price, 5 cents.

A somewhat technical discussion of the tobacco splitworm, also known as the potato-tuber moth. This insect is generally distributed throughout the Southern States and has caused serious loss to tobacco growers in one locality in Florida. It has also caused severe losses of potatoes in California. Remedial measures are recommended for its control when infesting tobacco.

Tests of the Waste, Tensile Strength, and Bleaching Qualities of the Different Grades of Cotton as Standardized by the United States Government. By N. A. Cobb, Agricultural Technologist in Charge of Agricultural Technology and Cotton Standardization. Pp. 8, fig. 1. Contribution from the Bureau of Plant Industry. Jan. 14, 1914. (Department Bulletin 62.) Price, 5 cents.

Preliminary report on milling tests. Of interest to cotton-mill men. Written in terms familiar to the cotton trade.

The Effect of Heat on Hawaiian Soils. By W. P. Kelley, Chemist, and William McGeorge, Assistant Chemist. Pp. 38. (Bulletin 30, Hawaii Agricultural Experiment Station.) Price, 10 cents.

The results of a careful study of the various chemical and mechanical changes produced in soils by the application of heat; intended principally for distribution in Hawaii.

Rice Soils of Hawaii: Their Fertilization and Management. By W. P. Kelley, Chemist. Pp. 23. (Bulletin 31, Hawaii Agricultural Experiment Station.) Price, 5 cents.

Describes the rice soils of Hawaii Territory and their management and needs. Of interest especially in Hawaiian Islands and incidentally in other tropical or semitropical regions.

FARMERS' BULLETINS.

The Gypsy Moth and the Brown-Tail Moth, with Suggestions for Their Control. By A. F. Burgess, In Charge Gypsy Moth and Brown-tail Moth Investigations. Pp. 24, figs. 10. Contribution from the Bureau of Entomology. Jan. 29, 1914. (Farmers' Bulletin 564.)

Corn Meal as a Food and Ways of Using it. By C. F. Langworthy, Ph. D., Sc. D., Chief of Nutrition Investigations, and Caroline L. Hunt, A. B., Expert in Nutrition. Pp. 24. Contribution from the Office of Experiment Stations. Jan. 22, 1914. (Farmers' Bulletin 565.)

Boys' Pig Clubs, with Special Reference to their Organization in the South. By W. F. Ward, Senior Animal Husbandman, Animal Husbandry Division, Bureau of Animal Industry. Pp. 16, figs. 8. Contributions from the Bureau of Animal Industry and Bureau of Plant Industry. Dec. 31, 1913. (Farmers' Bulletin 566.)

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

The Ohio and Mississippi Floods of 1912. By H. C. Frankenfield, Professor of Meteorology. Pp. 25, charts 35, diagrams 6. Dec. 27, 1913. (Bulletin Y, Weather Bureau.) Price, 40 cents.

Monthly Weather Review, vol. 41, No. 10, October, 1913. Pp. 1465-1637, maps 2, charts 7. (W. B. No. 521.) Price, 35 cents; \$4 a year.

Snow and Ice Bulletins for January 6, 13, 20, 27, 1914. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

National Weekly Weather Bulletin No. 1, for January, 1914, reporting temperature and rainfall, with a summary of weather conditions throughout the United States. (Weekly April-September, Monthly remainder of year.) Price, 25 cents a year.

Jos. A. ARNOLD,
Editor and Chief Division of Publications.

WASHINGTON : GOVERNMENT PRINTING OFFICE : 1914

This Circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., February 28, 1914.

MONTHLY LIST OF PUBLICATIONS.

[FEBRUARY, 1914.]

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When the Department's supply is exhausted applicants will be referred to the Superintendent of Documents, Government Printing Office, Washington, D. C., and all remittances should be sent to him.

SERIALS.

Journal of Agricultural Research, vol. 1, No. 5. February, 1914. Contents: The Presence of Some Benzene Derivatives in Soils. By Edmund C. Shorey.—Indicator Significance of Vegetation in Tooele Valley, Utah. By T. H. Kearney, L. J. Briggs, H. L. Shantz, J. W. McLane, and R. L. Piemeisel.—Citropsis, a New Tropical African Genus Allied to Citrus. By Walter T. Swingle and Maude Kellerman.—Winter Spraying with Solutions of Nitrate of Soda. By W. S. Ballard and W. H. Volck. Pp. 357-444, pls. 42-50, figs. 20. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The superintendent of documents will receive subscriptions for this publication, the price being \$2.50 per volume of 12 numbers.

Experiment Station Record, Vol. XXIX, No. 8, December, 1913. E. W. Allen, Ph. D., Editor. Pp. 701-800. Price, 15 cents.

Same, Vol. XXIX, No. 9, abstract number. Pp. 801-900. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The superintendent of documents has fixed the price of this serial, which is now issued in two volumes a year, nine numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

NOTE.—Contain information, instructions, and notices of a regulatory nature. Issued monthly by certain Bureaus. Free distribution limited to individuals, firms, establishments, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, at 5 cents each.

Bureau of Animal Industry. January, 1914. Pp. 18.

Bureau of Chemistry. January, 1914. Pp. 19.

SOIL SURVEYS.

- Soil Survey of Warren County, Mississippi.** By W. E. Tharp, of the U. S. Department of Agriculture, and W. M. Spann, of the Mississippi Geological Survey. Pp. 50, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Cass County, Missouri.** By H. H. Krusekopf, of the University of Missouri, and Floyd S. Bucher, of the U. S. Department of Agriculture. Pp. 28, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Barnes County, North Dakota.** By L. C. Holmes and J. E. Dunn, of the U. S. Department of Agriculture, and Herbert A. Hard, A. C. Anderson, Wm. Rommel, and A. C. Boucher, of the Agricultural and Economic Geological Survey of North Dakota. Pp. 47, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of the Hood River-White Salmon River Area, Oregon-Washington.** By A. T. Strahorn and E. B. Watson. Pp. 45, pls. 5, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Preston County, West Virginia.** By W. J. Latimer. Pp. 43, figs. 2, map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

- White Pine Under Forest Management.** By E. H. Frothingham, Forest Examiner. Pp. 70, pls. 7. Contribution from the Forest Service. Feb. 24, 1914. (Department Bulletin 13.) Price, 15 cents.

This bulletin summarizes the most important facts relative to white pine, with regard both to the original forests and to the second growth. Tables show the value of stumpage at prevailing prices and the profit or loss resulting from the management of second growth under favorable and unfavorable conditions. Methods are also suggested for securing successive crops and for increasing the quantity and quality of the yield.

- The Migratory Habit of the Housefly Larvae as Indicating a Favorable Remedial Measure. An Account of Progress.** By Robert H. Hutchison, Scientific Assistant. Pp. 11. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 28, 1914. (Department Bulletin 14.) Price, 5 cents.

This bulletin makes known a newly discovered habit of the housefly larvae that can be utilized as the basis for a new method for a greater control of the housefly. It is of special interest to entomologists, sanitarians, and health officers.

- Water Supply, Plumbing, and Sewage Disposal for Country Homes.** By Robert W. Trullinger, Rural Engineer. Pp. 46, figs. 38. Contribution from the Office of Experiment Stations. Feb. 21, 1914. (Department Bulletin 57.) Price, 10 cents.

This paper treats of farm home sanitation relating to water supplies, the safeguarding of the same against contamination, and the safe disposal of sewage; it is of interest to farmers in all sections of the country.

- Five Important Wild-Duck Foods.** By W. L. McAtee, Assistant Biologist. Pp. 19, figs. 15. Contribution from the Bureau of Biological Survey. Feb. 7, 1914. (Department Bulletin 58.) Price, 5 cents.

This bulletin is supplementary to Circular 81, Biological Survey, which treats of wild rice, wild celery, and pondweeds as food for wild fowl, adding five other plants of great intrinsic value which though now of only local importance are suitable for propagation over most of the United States. It shows that there is no reason why the delta duck potato, the wapato, the chufa, wild millet, and the banana water lily should not be introduced and take rank among staple foods of wild ducks in many localities where now unknown.

- The Relation of Cotton Buying to Cotton Growing.** By O. F. Cook, Bionomist in Charge of Crop Acclimatization and Adaptation Investigations. Pp. 21. Contribution from the Bureau of Plant Industry. Feb. 16, 1914. (Department Bulletin 60.) Price, 5 cents.

This bulletin investigates the relations existing between the cotton growers and the cotton buyers and manufacturers, in the hope of making clear to them that the present methods of buying tend rather to discourage the planting of better varieties, and the taking of those precautions which are necessary to produce superior fiber. The bulletin recommends certain reforms in the commercial world, that would develop a better system of production than the present very defective one.

Potato Wilt, Leaf-Roll, and Related Diseases. By W. A. Orton, Pathologist in Charge of Cotton and Truck Diseases and Sugar-Plant Investigations. Pp. 48, pls. 16. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 10, 1914. (Department Bulletin 64.) Price, 15 cents.

This paper is of interest to plant pathologists; it is suited to the potato-growing sections of the North, West, and South.

Cerebrospinal Meningitis ("Forage Poisoning"). By John R. Mohler, V. M. D., Chief of the Pathological Division. Pp. 14. Contribution from the Bureau of Animal Industry. (Professional Paper.) Feb. 14, 1914. (Department Bulletin 65.) Price, 5 cents.

This publication gives information about a serious disease of horses; it is especially suited to veterinarians in the States west of the Mississippi River and in the South.

Pasture and Grain Crops for Hogs in the Pacific Northwest. By Byron Hunter, Agriculturist, Office of Farm Management. Pp. 27, figs. 9. Contribution from the Bureau of Plant Industry. Feb. 25, 1914. (Department Bulletin 68.) Price, 5 cents.

This publication is intended to encourage hog raising in the Pacific Northwest; it is especially adapted to Washington, Oregon, and Idaho.

Inventory of Seeds and Plants Imported by the Office of Seed and Plant Introduction during the period from April 1 to June 20, 1912. Pp. 98. (Bureau of Plant Industry, Inventory No. 31. Nos. 33279 to 34092.) Price, 15 cents.

FARMERS' BULLETINS.

Sugar-Beet Growing Under Irrigation. By C. O. Townsend, Pathologist, Cotton and Truck Disease and Sugar-Plant Investigations. Pp. 26, figs. 5. Contribution from the Bureau of Plant Industry. Feb. 14, 1914. (Farmers' Bulletin 567.)

This bulletin considers the conditions and cultural methods employed in those areas where there is an insufficient rainfall for the profitable production of sugar beets, and is of interest mainly to residents of central, western, and southwestern portions of the United States. This area varies, shifting now east, now west, with the seasonal changes in climatic condition.

Sugar-Beet Growing Under Humid Conditions. By C. O. Townsend, Pathologist, Cotton and Truck Disease and Sugar-Plant Investigations. Pp. 20, figs. 4. Contribution from the Bureau of Plant Industry. Feb. 6, 1914. (Farmers' Bulletin 568.)

The bulletin is of special interest to sugar-beet growers in the East, the Ohio Valley, the Upper Mississippi Valley, and the Lake Region, where the rainfall is such as to make irrigation unnecessary. The subject of sugar-beet growing in humid climate is entirely covered in this bulletin.

Tobacco Culture. By W. W. Garner, Physiologist in Charge of Tobacco and Plant-Nutrition Investigations. Pp. 15, figs. 4. Contribution from the Bureau of Plant Industry. Feb. 27, 1914. (Farmers' Bulletin 571.)

Practical directions for making the seed bed, preparing the land, transplanting, cultivating, and harvesting the several classes of tobacco in the established tobacco-growing districts.

The Agricultural Outlook. Contribution from the Bureau of Statistics. Feb. 7, 1914. Live Stock of the United States. Pp. 43. (Farmers' Bulletin 575.)

The Contents of this bulletin relate principally to estimates of the supply of live stock of specified classes on farms in the United States on January 1, 1914, the average farm price per head, and the estimated total value of each class. The number and value of farm animals is compared with population, and some causes of the shortage of meat animals and the increase in their value are given.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Bulletin of the Mount Weather Observatory, vol. 6, pt. 3. Pp. 61-103, figs. 14. (W. B. No. 524.) Price, 25 cents.

Monthly Weather Review, vol. 41, No. 11, November, 1913. Pp. 1639-1797, maps 2, charts 7. (W. B. No. 523.) Price, 35 cents; \$4 a year.

Snow and Ice Bulletins for February 3, 10, 17, 24, 1914. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

National Weekly Weather Bulletin No. 2, for February, 1914, reporting temperature and rainfall, with a summary of weather conditions throughout the United States. (Weekly April-September, Monthly remainder of year.) Price, 25 cents a year.

Jos. A. ARNOLD,
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United States Department of Agriculture,

WASHINGTON, D. C., March 31, 1914.

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Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

REPORTS.

Annual Reports of the Department of Agriculture for the year ended June 30, 1913. (Report of the Secretary, with Reports of Heads of the Several Branches of the Department.) Pp. 370. Price, 40 cents. The department's supply of this publication is exhausted.

Annual Report of the Hawaii Agricultural Experiment Station for 1913. Pp. 53, pls. 3. Mar. 16, 1914. Price, 10 cents.

SERIALS.

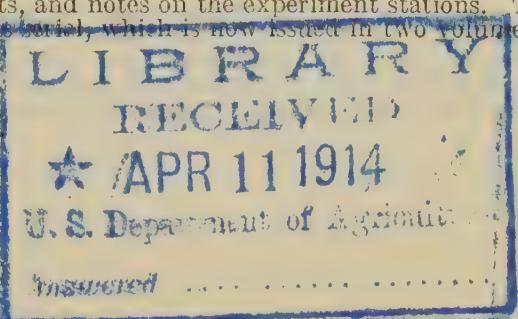
Journal of Agricultural Research, Vol. 1, No. 6. March, 1914. Contents: Tyloses: Their Occurrence and Practical Significance in Some American Woods. By Eloise Gerry.—The Cambium Miner in River Birch. By Charles T. Greene.—A Study of Some Imperfect Fungi Isolated from Wheat, Oat, and Barley Plants. By Edward C. Johnson.—The Origin of Some of the Streptococci Found in Milk. By L. A. Rogers and Arnold O. Dahlberg.—Crystallization of Cream of Tartar in the Fruit of Grapes. By William B. Alwood.—The Reduction of Arsenic Acid to Arsenious Acid by Thiosulphuric Acid. By Robert M. Chapin.—Title-page, Contents, and Index of Volume I. Pp. 455-533+i-xiv, pls. 52-63, figs. 8. Price 25 cents.

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Experiment Station Record, Vol. XXX, No. 1, January, 1914. E. W. Allen, Ph. D., Editor. Pp. 1-100. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The superintendent of documents has fixed the price of this journal, which is now issued in two volumes a year, ten numbers each, at \$1 a volume.

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Bureau of Animal Industry. February, 1914. Pp. 19-30.

Federal Horticultural Board. January-February, 1914. Pp. 8.

Insecticide and Fungicide Board. February, 1914. Pp. 24.

SOIL SURVEYS.

Soil Survey of Ashley County, Arkansas. By E. S. Vanatta, B. D. Gilbert, E. B. Watson, and A. H. Meyer. Pp. 39, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of the Fresno Area, California. By A. T. Strahorn, J. W. Nelson, L. C. Holmes, and E. C. Eckmann. Pp. 82, pls. 4, fig. 1, maps, 2. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Christian County, Kentucky. By Risden T. Allen and T. M. Bushnell. Pp. 34, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Genesee County, Michigan. By B. D. Gilbert. Pp. 39, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Lafayette County, Mississippi. By A. L. Goodman, of the U. S. Department of Agriculture, and E. M. Jones, of the Mississippi Geological Survey. Pp. 28, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Reconnaissance of the Ozark Region of Missouri and Arkansas. By Curtis F. Marbut. Pp. 153, figs. 3, map. (From F. O. Soils, 1911.) Price, 15 cents.

Soil Survey of the Middle Rio Grande Valley Area, New Mexico. By J. W. Nelson, L. C. Holmes, and E. C. Eckman. Pp. 52, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Ashe County, North Carolina. By R. B. Hardison, of the U. S. Department of Agriculture, and S. O. Perkins, of the North Carolina Department of Agriculture. Pp. 32, pl. 1, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Lehigh County, Pennsylvania. By William T. Caster, Jr., and J. A. Kerr. Pp. 53, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Barnwell County, South Carolina. By William T. Carter, Jr., Risden T. Allen, J. E. Lapham, Floyd S. Bucher, and J. H. Agee. Pp. 49, pl. 1, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Putnam County, Tennessee. By C. S. Waldrop. Pp. 32, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Robertson County, Tennessee. By J. H. Agee, Lewis A. Hurst, and H. Jennings, of the U. S. Department of Agriculture, and R. F. Rogers, of the Tennessee Geological Survey. Pp. 26, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Archer County, Texas. By Arthur E. Taylor, Clarence Lounsbury, J. O. Veatch, and Ewing Scott. Pp. 52, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

Balsam Fir. By Raphael Zon, Chief of Forest Investigations. Pp. 68, pls. 2, figs. 8. Contribution from the Forest Service. (Professional Paper.) Mar. 25, 1914. (Department Bulletin 55.) Price, 10 cents.

This bulletin deals with all aspects of balsam fir, its distribution, the forest types in which it occurs, the present stand and cut, its economic importance, especially in relation to the paper-pulp industry, methods and cost of lumbering, life history of the tree, characteristics of the wood, rate of growth and yield, and proper methods of management. Balsam fir is found in commercial quantities in the northeastern border States from Maine to Minnesota.

Factors Governing the Successful Shipment of Oranges from Florida. By A. V. Stubenrauch, H. J. Ramsey, and Lloyd S. Tenny; assisted by A. W. McKay, B. B. Pratt, C. S. Pomeroy, K. B. Lewis, G. M. Darrow, Margaret Connor, and J. F. Fernald, of the Office of Horticultural and Pomological Investigations. Pp. 50, pls. 15, figs. 26. Contribution from the Bureau of Plant Industry. Mar. 28, 1914. (Department Bulletin 63.) Price, 20 cents.

Report on harvesting, handling, and shipping experiments made on a commercial scale through seven shipping years, showing that decay can be materially lessened by greater care and the avoidance of mechanical injury to the fruit.

Statistics of Sugar in the United States and Its Insular Possessions, 1881-1912. By Frank Andrews, Assistant Chief of the Division of Crop Estimates. Pp. 25. Contribution from the Bureau of Statistics. Mar. 10, 1914. (Department Bulletin 66.) Price, 5 cents.

This bulletin, which indicates the amount and sources of the sugar supply of the United States, is of especial interest in sugar-producing regions; also to persons concerned with problems of food supply.

Tests of Rocky Mountain Woods for Telephone Poles. By Norman de W. Betts and A. L. Heim, Engineers in Forest Products. Pp. 28, figs. 8. Contribution from the Forest Service. (Professional Paper.) Mar. 17, 1914. (Department Bulletin 67.) Price, 5 cents.

This bulletin gives the results of tests on western red cedar, lodgepole pine, and Engelmann spruce poles to determine their suitability for telephone lines. Values are presented for fiber stress at elastic limit, modulus of rupture, stiffness, and modulus of elastic resilience. Of value to lumbermen in the Rocky Mountain and Pacific Coast States and to users of telephone poles.

Cicuta, or Water Hemlock. By C. Dwight Marsh and A. B. Clawson, Physiologists, Drug-Plant and Poisonous-Plant Investigations, Bureau of Plant Industry, and Hadleigh Marsh, Veterinary Inspector, Bureau of Animal Industry. Pp. 27, pls. 4. Contribution from the Bureau of Plant Industry and the Bureau of Animal Industry. (Professional Paper.) Mar. 28, 1914. (Department Bulletin 69.) Price, 10 cents.

This bulletin describes water hemlock and its toxic effect upon animal life when taken into the system; it points out the distinction between it and other unbelliferous plants, particularly conium, with which it is most likely to be confounded. As the toxic principle is largely confined to the root-stock, the tops and seeds if they become mixed with hay are not a source of danger. The subject is of general interest, as cicuta is found in nearly all parts of the United States.

Raising and Fattening Beef Calves in Alabama. By Dan T. Gray, Formerly Professor of Animal Husbandry, Alabama Polytechnic Institute, and W. F. Ward, Senior Animal Husbandman in Beef Cattle Investigations, Animal Husbandry Division. Pp. 11, pl. 1. Contribution from the Bureau of Animal Industry. Mar. 30, 1914. (Department Bulletin 73.) Price, 5 cents.

This publication is of interest to farmers in the Southern States.

The Potato Quarantine and the American Potato Industry. By W. A. Orton, Pathologist in Charge of Cotton and Truck Disease and Sugar Plant Investigations, and Vice Chairman of the Federal Horticultural Board. Pp. 20, fig. 1. Contribution from the Bureau of Plant Industry and the Federal Horticultural Board. Mar. 31, 1914. (Department Bulletin 81.) Price, 5 cents.

This bulletin tells of the necessity for establishing a quarantine against potatoes from certain countries, gives brief descriptions of the potato diseases that have been imported, indicates some of the agencies by which these diseases have been spread over this country, and gives information that potato growers should have in advance of the planting season. It is intended for general distribution.

Tests of Wooden Barrels. By J. A. Newlin, Engineer in Charge of Timber Tests. Pp. 12, pls. 5, fig. 1. Contribution from the Forest Products Laboratory, Forest Service. (Professional Paper.) Mar. 14, 1914. (Department Bulletin 86.) Price, 5 cents.

This bulletin describes tests that are of special interest to barrel manufacturers and to manufacturers and shippers of dangerous liquids.

A Preliminary Report on the Sugar-Beet Wireworm. By John E. Graf, Entomological Assistant, Truck Crop and Stored Products Insect Investigations. Pp. 68, pls. 23, figs. 9. Feb. 28, 1914. (Bulletin 123, Bureau of Entomology.) Price, 25 cents.

This paper sets forth the manner of injury, the history of the species, and the insects associated with the sugar-beet wireworm in the destruction of the beet roots in different stages of growth, the number of its food plants, its life history and habits, suggestions as to the methods for its control, and other useful data. This is a preliminary report; but so many facts have been learned that it is deemed advisable to publish them at this time, as it will be several years before a complete study of the subject can be made.

The Papaya in Hawaii. By J. E. Higgins, Horticulturist, and Valentine S. Holt, Assistant Horticulturist. Pp. 44, pls. 10. Mar. 26, 1914. (Bulletin 32, Hawaii Experiment Station.) Price, 15 cents.

The Red Clay Soil of Porto Rico. By P. L. Gile, Chemist, and C. N. Ageton, Assistant Chemist. Pp. 24, pl. 1. (Bulletin 14, Porto Rico Agricultural Experiment Station.) Price, 5 cents.

FARMERS' BULLETINS.

A System of Farm Cost Accounting. By C. E. Ladd, Agent, Office of Farm Management. Pp. 15. Contribution from the Bureau of Plant Industry. (In cooperation with the department of farm management, New York State College of Agriculture.) Mar. 4, 1914. (Farmers' Bulletin 572.)

This bulletin is of interest to farmers in all parts of the country who desire to keep accounts and yet have not worked out a system for themselves. Others who are keeping farm accounts, but who are not satisfied with the results will probably find suggestions of value herein. This system has been in use by Prof. Warren of the New York College of Agriculture on his own farm for the last seven years, and its principles are published in his book entitled "Farm Management." For three years the system has been given a fair trial by a number of farmers under immediate supervision of its author working jointly for the United States Department of Agriculture and the New York State College of Agriculture.

Growing Egyptian Cotton in the Salt River Valley, Arizona. By E. W. Hudson, Assistant, Crop Physiology and Breeding Investigations. Pp. 8. Contribution from the Bureau of Plant Industry. Mar. 14, 1914. (Farmers' Bulletin 577.)

This bulletin describes methods of selecting and preparing the land for, and the irrigating and cultivating of, Egyptian cotton in the Salt River Valley, which have proved successful and are believed to be well suited to that crop in that section. The bulletin is of no special interest to cotton growers in other parts of the country.

The Agricultural Outlook. Contribution from the Bureau of Statistics (Agricultural Forecast) and Bureau of Plant Industry. Mar. 18, 1914. Pp. 50. (Farmers' Bulletin 581.)

The following subjects are discussed in this bulletin: Corn, world acreage and production, and imports from Argentina—Oats, world acreage and production; imports from Canada—Barley, rye, potatoes, and flax, world acreage and production—Imports of beef from Argentina—Recent developments in colonial production of cotton—Crop-reporting systems and sources of crop information in foreign countries.

The Agricultural Outlook. Contribution from the Bureau of Statistics (Agricultural Forecasts) and the Bureau of Plant Industry. Mar. 23, 1914. Pp. 22. (Farmers' Bulletin 584.)

Contents: Stocks of grain on farms March 1—Accuracy of estimates of stocks of grain—Shipments of grain out of counties where grown—Preparing seed corn for planting (by C. P. Hartley)—The preparation of seed grain for spring planting (by M. A. Carleton)—Wages of farm labor—Hours of farm hired labor—Trend of prices of farm products—Value per acre of crop production—Special Florida and California crop report.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Bulletin of the Mount Weather Observatory, vol. 6, pt. 4. Pp. 107-194, figs. 33. (W. B. No. 526.) Price, 25 cents.

Monthly Weather Review, vol. 41, No. 12, December, 1913. Pp. 1799-1952, maps 2, charts 7. (W. B. No. 525.) Price, 35 cents; \$4 a year.

Snow and Ice Bulletins for March 3, 10, 17, 24, 31, 1914. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

National Weekly Weather Bulletin No. 3, for March, 1914, reporting temperature and rainfall, with a summary of weather conditions throughout the United States. (Weekly April-September, Monthly remainder of year.) Price, 25 cents a year.

Jos. A. ARNOLD,
Editor and Chief Division of Publications.

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United States Department of Agriculture,

WASHINGTON, D. C., April 30, 1914.

MONTHLY LIST OF PUBLICATIONS.

[APRIL, 1914.]

No publications are sold by the Department of Agriculture; therefore do not send money to this office.

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When this department's supply is exhausted publications can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

Journal of Agricultural Research. Vol. 2. No. 1. April, 1914. Contents: Flavor of Roquefort Cheese. By James N. Currie.—Corn-Leaf Blotch Miner. By W. J. Phillips.—Coloration of the Seed Coat of Cowpeas. By Albert Mann.—Experiments with Apple Leaf-Spot Fungi. By John W. Roberts.—Longevity of Pycnospores of the Chestnut-Blight Fungus. By F. D. Heald and M. W. Gardner. Pp. 1-75, pls. 7, figs. 6. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXX, No. 2, February, 1914. E. W. Allen, Ph. D., Editor. Pp. 101-200. Price, 15 cents.

Same, Vol. XXX, No. 3, Abstract Number. Pp. 201-300. Price, 15 cents.

Same, Vol. XXX, No. 4, March, 1914. Pp. 301-400. Price, 15 cents.

Same, Vol. XXX, No. 5, April, 1914. Pp. 401-500. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

NOTE.—Contain information, instructions, and notices of a regulatory nature. Issued monthly by certain bureaus. Free distribution limited to individuals, firms, establishments, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, at 5 cents each.

Bureau of Animal Industry. March, 1914. Pp. 31-43. Apr. 25, 1914.

Bureau of Biological Survey. Regulations for the Aleutian Islands Reservation, Alaska. Pp. 2. Apr. 13, 1914.

Bureau of Chemistry. February, 1914. Pp. 21-108. Apr. 2, 1914.
Insecticide and Fungicide Board. March, 1914. Pp. 25-29. Apr. 17, 1914.

SOIL SURVEYS.

Soil Survey of Mesilla Valley, New Mexico-Texas. By J. W. Nelson and L. C. Holmes. Pp. 39, fig. 1. Map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

The Action of Manganese in Soils. By J. J. Skinner and M. X. Sullivan. Assisted by J. H. Beattie, F. R. Reid, and H. Winckelmann, Scientists in Soil Fertility Investigations. Pp. 32. Contribution from the Bureau of Soils. (Professional Paper.) Apr. 3, 1914. (Department Bulletin 42.) Price, 5 cents.

The results given in this bulletin throw considerable light on the effect of this catalytic fertility in various soils. Manganese as a fertilizer is comparatively unknown and untried in this country, so that discussion of its action is necessarily scientific, yet of great interest to those growers whose technical training induces them to experiment with new substances to increase or control crop production.

Immunization Tests With Glanders Vaccine. By John R. Mohler and Adolph Eichhorn, Pathological Division. Pp. 13. Contribution from the Bureau of Animal Industry. (Professional Paper.) Apr. 15, 1914. (Department Bulletin 70.) Price, 5 cents.

A technical discussion of the use of mallein as a diagnostic agent for glanders; of interest to veterinarians.

The Wet Lands of Southern Louisiana and Their Drainage. By Charles W. Okey, Drainage Engineer. Pp. 82, pls. 4, figs. 18. Contribution from the Office of Experiment Stations. (Professional Paper.) Apr. 30, 1914. (Department Bulletin 71.) Price, 15 cents.

Alfalfa Seed Production; Pollination Studies. By C. V. Piper, Agrostologist in Charge, and Morgan W. Evans, Roland McKee, and W. J. Morse, Scientific Assistants, Forage-Crop Investigations. Pp. 32, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 8, 1914. (Department Bulletin 75.) Price, 5 cents.

This bulletin deals with the biological problems concerned in the pollination and fecundation of the alfalfa flower. It is intended primarily for technical agronomists and botanists.

Laboratory and Field Assay of Arsenical Dipping Fluids. By Robert M. Chapin, Senior Biochemist, Biochemic Division. Pp. 17, fig. 1. Contribution from the Bureau of Animal Industry. (Professional Paper.) Apr. 29, 1914. (Department Bulletin 76.) Price, 5 cents.

A popular account of laboratory tests for actual arsenious oxid and for total arsenic, together with methods of field assay for dips used in tick eradication. Of special interest to officials and others concerned with the analysis and control of these preparations.

Research Studies on the Curing of Leaf Tobacco. By W. W. Garner, Physiologist in Charge, C. W. Bacon, Assistant Physiologist, and C. L. Foubert, Assistant in Tobacco Chemistry, Tobacco and Plant-Nutrition Investigations. Pp. 40. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 23, 1914. (Department Bulletin 79.) Price, 5 cents.

This bulletin gives the results of a study of the physiological changes occurring in curing tobacco in the barn and is of special interest to those concerned with the improvement of tobacco curing.

Powdery Scab (Spongospora subterranea) of Potatoes. By I. E. Melhus, Pathologist, Cotton and Truck Disease and Sugar-Plant Investigations. Pp. 16, pls. 3. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 6, 1914. (Department Bulletin 82.) Price, 5 cents.

This paper will be of interest to plant pathologists and to potato growers in the northern and southern potato-growing sections.

Farmers' Institute and Agricultural Extension Work in the United States in 1913. By John Hamilton, Farmers' Institute Specialist. Pp. 40. Contribution from the Office of Experiment Stations. Apr. 22, 1914. (Department Bulletin 83.) Price, 5 cents.

This publication is of interest to farmers' institute workers in the United States and Canada.

Experiments with Udo, the New Japanese Vegetable. By David Fairchild, Agricultural Explorer in Charge of the Office of Foreign Seed and Plant Introduction. Pp. 15., figs. 12. Contribution from the Bureau of Plant Industry. Apr. 16, 1914. (Department Bulletin 84.) Price, 5 cents.

Results of experiments in Maryland. Gives methods of cultivation, preparing, and cooking. Adapted to New England, the Atlantic States as far south as the Carolinas, the rainy region of Puget Sound, and the truck sections of California about Sacramento.

The Cost of Pasteurizing Milk and Cream. By John T. Bowen, Technologist, Dairy Division. Pp. 12, fig. 1. Contribution from the Bureau of Animal Industry. (Professional paper.) Apr. 27, 1914. (Department Bulletin 85.) Price, 5 cents.

This bulletin deals with the cost of pasteurization from an engineering point of view. It contains desirable information for proprietors of creameries and milk plants and for designers and manufacturers of pasteurizing apparatus.

The Temperature of the Honey Bee Cluster in Winter. By E. F. Phillips, Ph. D., in Charge of Bee Culture Investigations, and George S. Demuth, Agricultural Assistant. Pp. 16, figs. 2. Contribution from the Bureau of Entomology. Apr. 30, 1914. (Department Bulletin 93.) Price, 5 cents.

This bulletin presents studies of bees as affected by temperature conditions during winter and is of special interest to beekeepers in the North.

Alum in foods. Pp. 7. Contribution from the Referee Board of Consulting Scientific Experts. (Professional Paper.) Apr. 29, 1914. (Department Bulletin 103.) Price, 5 cents.

Findings of the Referee Board of Consulting Experts on the effects of the use of alum in food.

American Black Flies or Buffalo Gnats. By J. K. Malloch, Entomological Assistant. Pp. 72, pls. 6. Apr. 6, 1914. (Technical series, No. 26, Bureau of Entomology.) Price, 15 cents.

The Organic Nitrogen of Hawaiian Soils. By W. P. Kelley, Chemist, and Alice R. Thompson, Assistant Chemist. Pp. 22. Apr. 25, 1914. (Bulletin 33, Hawaii Agricultural Experiment Station.) Price, 5 cents.

FARMERS' BULLETINS.

Texas or Tick Fever. By John R. Mohler, Chief of the Pathological Division. Pp. 24, figs. 5. Contribution from the Bureau of Animal Industry, Mar. 21, 1914. (Farmers' Bulletin 569.)

This bulletin is a revision of and supersedes Farmers' Bulletin 258. It is of interest to farmers throughout the South.

The Angora Goat. By L. L. Heller, Animal Husbandry Division. Pp. 16, figs. 6. Contribution from the Bureau of Animal Industry. Apr. 27, 1914. (Farmers' Bulletin 573.)

This is a popular paper suitable for present and prospective Angora goat raisers; it is especially adapted to the Southwest and the recently cleared portions of the North and Northwest.

Poultry House Construction. By Alfred R. Lee, Junior Animal Husbandman in Poultry Investigations, Animal Husbandry Division. Pp. 20, figs. 13. Contribution from the Bureau of Animal Industry. Apr. 7, 1914. (Farmers' Bulletin 574.)

This bulletin gives practical instruction for locating and constructing poultry houses. It is adapted for general circulation.

Crimson Clover: Utilization. By J. M. Westgate, Agronomist in Charge of Clover Investigations, Office of Forage-Crop Investigations. Pp. 10, figs. 7. Contribution from the Bureau of Plant Industry. Apr. 17, 1914. (Farmers' Bulletin 579.)

This publication gives time of cutting, methods of harvesting, feeding value, and use as a soil improver, and as a cover crop. Adapted to the Eastern States.

Beef Production in the South. By W. F. Ward, Senior Animal Husbandman in Beef Cattle Investigations, Animal Husbandry Division, and Dan T. Gray, Chief of the Animal Husbandry Division of the North Carolina Experiment Station. Pp. 20, figs. 9. Contribution from the Bureau of Animal Industry. Apr. 18, 1914. (Farmers' Bulletin 580.)

Gives instruction in handling and feeding beef cattle, the best breeds for the South, and the best pasture plants. Adapted to the Southern States.

The Agricultural Outlook. Contribution from the Bureau of Statistics. (Crop Estimates). Apr. 23, 1914. Pp. 20. (Farmers' Bulletin 590.)

Contents.—Losses of live stock—Winter wheat forecast—Florida and California crop report—Louisiana sugar crop of 1913—Trend of prices of farm products—How to use anti-hog-cholera serum.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weekly Weather Bulletin Nos. 4, 5, 6, for April, 1914, reporting temperature and rainfall, with a summary of weather conditions throughout the United States. (Weekly April-September, Monthly remainder of year.) Price 25 cents a year.

Jos. A. ARNOLD,
Editor and Chief Division of Publications.



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United States Department of Agriculture,

WASHINGTON, D. C., May 30, 1914.

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REPORTS.

Yearbook of the U. S. Department of Agriculture, 1913. Pp. 541, pls. 54, figs. 21, frontispiece. Price, cloth, 75 cents.

The Yearbook contains the annual report of the Secretary of Agriculture, 74 pages; 14 miscellaneous articles, 291 pages; an appendix, 150 pages; and index, 27 pages. The Appendix contains lists of agricultural colleges, experiment stations, and of officials in charge of agricultural interests in the several States, and statistical tables covering production, prices, exports, and imports of the principal crops and farm animals.

Only 6 out of each 100 copies of the Yearbook are assigned to this Department, which is insufficient to supply even its regular correspondents and co-workers. Other applicants are therefore respectfully referred to their Representatives or Delegates in Congress, to whom the other 94 per cent are allotted for distribution, or to the Superintendent of Documents, Government Printing Office, Washington, D. C., who has it for sale at 75 cents per copy.

Annual Report of the Porto Rico Agricultural Experiment Station for 1913. Pp. 34, pls. 3. Price, 5 cents.

SERIALS.

Journal of Agricultural Research. Vol. 2, No. 2. May, 1914. Contents: Behavior of Cup Current Meters Under Conditions not Covered by Standard Ratings. By Fred C. Scobey.—Eremocitrus, A New Genus of Hardy, Drought-resistant Citrous Fruits from Australia. By Walter T. Swingle.—Relation of Bacterial Transformations of Soil Nitrogen to Nutrition of Citrous Plants. By Karl F. Kellerman and R. C. Wright.—Aroma of Hops: A Study of the Volatile Oil with Relation to the Geographical Sources of the Hops. By Frank Rabak.—Lesser Bud-Moth. By E. W. Scott and J. H. Paine.—Two New Wood-destroying Fungi. By James R. Weir. Pp. 77, pls. 8-10, figs. 28. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXX, No. 6. Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

The RECORD contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

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Bureau of Animal Industry. April, 1914. Pp. 45-56. May 22, 1914.

Bureau of Chemistry. March, 1914. Pp. 109-200. May 12, 1914.

Same, April, 1914. Pp. 201-206. May 22, 1914.

Federal Horticultural Board. April, 1914. Pp. 19-22. May 18, 1914.

Insecticide and Fungicide Board. April, 1914. Pp. 31-50. May 28, 1914.

Bureau of Plant Industry. April, 1914. Pp. 7. May 27, 1914.

SOIL SURVEYS.

Soil Survey of Conecuh County, Alabama. By L. Cantrell and R. A. Winston, of the U. S. Department of Agriculture, and F. W. Kolb, of the Alabama Department of Agriculture and Industries. Pp. 48, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Covington County, Alabama. By R. T. Avon Burke, of the U. S. Department of Agriculture, and A. M. O'Neal, jr., W. E. Wilkinson, N. Eric Bell, and J. B. Wilkinson, of the Alabama Department of Agriculture and Industries. Pp. 37, pl. 1, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Boone County, Indiana. By W. E. Tharp, of the U. S. Department of Agriculture, and E. J. Quinn, of the Indiana Department of Geology. Pp. 39, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Montgomery County, Indiana. By Grove B. Jones, of the U. S. Department of Agriculture, and C. H. Orahood, of the Indiana Department of Geology. Pp. 26, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Barton County, Missouri. By H. H. Krusekopf, of the University of Missouri, and Floyd S. Bucher, of the U. S. Department of Agriculture. Pp. 28, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

The Topographic Features of the Desert Basins of the United States with Reference to the Possible Occurrence of Potash. By E. E. Free, Scientist in Fertilizer Investigations. Pp. 65, pls. 6, map. Contribution from the Bureau of Soils. (Professional Paper.) May 8, 1914. (Department Bulletin 54.) Price, 25 cents.

This paper describes a topographical examination which has been made of the desert basins of the United States, with a view to the possible discovery of potash in commercial quantities, and is intended particularly for those interested in the production of fertilizers.

Suitability of Longleaf Pine for Paper Pulp. By Henry E. Surface, Chemical Engineer in Forest Products, and Robert E. Cooper, Chemist in Forest Products. Pp. 26. Contribution from the Forest Service. May 29, 1914. (Department Bulletin 72.) Price, 5 cents.

Report of a series of tests in cooperation with the University of Wisconsin, undertaken, (1) to determine the suitability of the southern pines for paper pulps, (2) to ascertain the effects of varying cooking conditions in the sulphate process of pulp making, (3) to compare the sulphate process with the soda process.

Rocky Mountain Mine Timbers. By Norman de W. Betts, Engineer in Forest Products, Forest Products Laboratory. Pp. 34, figs. 7. Contribution from the Forest Service. (Professional Paper.) May 7, 1914. (Department Bulletin 77.) Price, 5 cents.

This paper is of interest to miners and producers of mine timbers and will be suitable for distribution in Idaho, Montana, Wyoming, Colorado, Nevada, Arizona, and New Mexico.

The So-called Tobacco Wireworm in Virginia. By G. A. Runner, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 30, pls. 2, figs. 5. Contribution from the Bureau of Entomology. (Professional Paper.) May 18, 1914. (Department Bulletin 78.) Price, 5 cents.

This bulletin is descriptive of an insect enemy of tobacco and corn. Of especial interest in the eastern tobacco and corn districts.

The Control of the Codling Moth in the Pecos Valley in New Mexico. By A. L. Quaintance, in Charge of Deciduous Fruit Insect Investigations. Pp. 8, figs. 4. Contribution from the Bureau of Entomology. Apr. 30, 1914. (Department Bulletin 88.) Price, 5 cents.

This bulletin describes the codling moth as it affects fruit growing in the Pecos Valley, N. Mex. It is of interest to fruit growers in the Southwest.

The Death of Chestnuts and Oaks Due to Armillaria mellea. By W. H. Long, Forest Pathologist, Office of Investigations in Forest Pathology. Pp. 8, pls. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 22, 1914. (Department Bulletin 89.) Price, 5 cents.

A record of the results of field investigations of the condition of chestnut and oak in Chenango County, N. Y.

The Rose Aphis. By H. M. Russell, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 15, pls. 3, figs. 4. Contribution from the Bureau of Entomology. May 19, 1914. (Department Bulletin 90.) Price, 5 cents.

This bulletin is of interest to rose growers everywhere.

Cost and Method of Clearing Land in the Lake States. By Harry Thompson, Agriculturist, and Earl D. Strait, Scientific Assistant, Office of Farm Management. Pp. 25, figs. 10. Contribution from the Bureau of Plant Industry. May 16, 1914. (Department Bulletin 91.) Price, 5 cents.

This bulletin gives details of cost and methods of clearing land in the Lake States and is of special interest to settlers in the logged-off sections of Michigan, Wisconsin, and Minnesota.

Destruction of Germs of Infectious Bee Diseases by Heating. By G. F. White, M. D., Ph. D., Expert Engaged in the Investigation of Bee Diseases. Pp. 8. Contribution from the Bureau of Entomology. May 15, 1914. (Department Bulletin 92.) Price, 5 cents.

This paper is of interest to beekeepers in all parts of the United States; it was read before the New York State Beekeepers' Association, February 10, 1914, at Ithaca, N. Y.

Tobacco Insects in Hawaii. By D. F. Fullaway, Entomologist. Pp. 20, figs. 9. May 25, 1914. (Bulletin 34, Hawaii Agricultural Experiment Station.) Price, 5 cents.

Porto Rican Beekeeping. By E. F. Phillips, Ph. D., In Charge, Bee Culture Investigations, Bureau of Entomology, U. S. Department of Agriculture. Pp. 24, pls. 2. (Bulletin 15, Porto Rico Agricultural Experiment Station.) Price, 5 cents.

Bighead in Sheep. By H. J. Frederick, Veterinarian, Utah Agricultural Experiment Station. Pp. 6. Contribution from the Bureau of Animal Industry. May 4, 1914.

This paper gives the results of investigations made by cooperation between the Utah Agricultural Experiment Station and the Bureau of Animal Industry of the United States Department of Agriculture.

Effects of Tick Eradication on the Cattle Industry of the South. By W. F. Ward, Senior Animal Husbandman, Animal Husbandry Division, Bureau of Animal Industry. Pp. 26, figs. 8.

This paper details the recent improvements in the cattle and pastures in the tick-free areas of the Southern States and suggests methods of improvement which should be adopted as soon as the ticks have been eradicated from any section. Intended for distribution in the tick-infested region.

FARMERS' BULLETINS.

Breeds of Sheep for the Farm. By F. R. Marshall, Senior Animal Husbandman in Sheep and Goat Investigations, Animal Husbandry Division. Pp. 16, figs. 10. Contribution from the Bureau of Animal Industry. May 2, 1914. (Farmers' Bulletin 576.)

Discusses the breeds in a way to enable those not familiar with them to know which are likely to meet their requirements.

The Making and Feeding of Silage. Contents: Making and Feeding Silage. By T. E. Woodward.—Silage for Horses. By George M. Rommel.—Silage for Beef Cattle. By W. F. Ward.—Silage for Sheep. By E. L. Shaw. Pp. 24, figs. 6. Contribution from the Bureau of Animal Industry. May 18, 1914. (Farmers' Bulletin 578.)

Gives methods and costs of growing and harvesting silage, feeding value, and instructions for filling the silo. Adapted for general circulation. Supersedes Farmers' Bulletin 556.

Uses for Chestnut Timber Killed by the Bark Disease. By J. C. Nellis, Forest Examiner, Forest Service. Pp. 24, figs. 8. Contribution from the Forest Service in cooperation with the Bureau of Plant Industry. May 16, 1914. (Farmers' Bulletin 582.)

This bulletin contains important information as to the utilization that may be made of chestnut timber killed by the bark disease and should be especially valuable to woodlot owners throughout the region affected.

The Common Mole of the Eastern United States. By Theo. H. Scheffer, Assistant Biologist. Pp. 10, figs. 4. Contribution from the Bureau of Biological Survey. May 14, 1914. (Farmers' Bulletin 583.)

This bulletin treats of the mole east of the one hundredth meridian. It contains an account of its habits, the nature of the damages committed by it, and the methods employed for its destruction. It also seeks to remove some popular misconceptions concerning this little animal. It is of interest to gardeners, lawn makers, caretakers of parks and cemeteries, etc.

Natural and Artificial Incubation of Hens' Eggs. By Harry M. Lamon, Senior Animal Husbandman in Poultry Investigations, Animal Husbandry Division. Pp. 16, figs. 3. Contribution from the Bureau of Animal Industry. May 5, 1914. (Farmers' Bulletin 585.)

Describes incubation, natural and artificial. Of interest to poultry raisers everywhere.

The Agricultural Outlook. Contribution from the Bureau of Statistics (Crop Estimates). Pp. 21. May 22, 1914. (Farmers' Bulletin 598.)

Reports condition of winter wheat, rye, hay, pastures, and spring plowing. Statistics of sugar and cotton crop of 1913.

SEPARATES.

Health Laws. By Francis G. Caffey, Solicitor, U. S. Department of Agriculture. Pp. 125-134. (Separate 619, Yearbook, 1913.) Price, 5 cents.

The South American Meat Industry. By A. D. Melvin, Chief of the Bureau of Animal Industry. Pp. 347-364, pls. 8. (Separate 629, Yearbook 1913.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Report of the Chief of the Weather Bureau, 1912-13. Pp. 252, charts 4.

National Weekly Weather Bulletin Nos. 7, 8, 9, 10, for May, 1914, reporting temperature and rainfall, with a summary of weather conditions throughout the United States. (Weekly April-September, Monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief Division of Publications.



This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., June 30, 1914.

MONTHLY LIST OF PUBLICATIONS.

[JUNE, 1914.]

No publications are sold by the Department of Agriculture; therefore do not send money to this office.

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Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

REPORTS.

Annual Report of the Guam Agricultural Experiment Station for 1913. Pp. 24, pls. 4; figs. 6. June 5, 1914. Price, 5 cents.

SERIALS.

Journal of Agricultural Research, Vol. 2, No. 3. June, 1914. Contents: Bacteria Concerned in the Production of the Characteristic Flavor in Cheese of the Cheddar Type, by Alice C. Evans, E. G. Hastings, and E. B. Hart.—Relation of the Action of Certain Bacteria to the Ripening of Cheese of the Cheddar Type. By E. B. Hart, E. G. Hastings, E. M. Flint, and Alice C. Evans.—Citrus-Root Nematode. By N. A. Cobb.—Pellicularia Koleroga on Coffee in Porto Rico. By G. L. Fawcett.—Feeding Habits of the Boll Weevil on Plants Other than Cotton. By B. R. Coad.—Identity of Peridermium Fusiforme with Peridermium Cerebrum. By George G. Hedgcock and W. H. Long. Pp. 167-250, pls. 1, figs. 16. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXIX. Index number. E. W. Allen, Ph. D., Editor. Pp. 901-1004. Price, 15 cents.

Same, Vol. XXX, No. 7, May, 1914. Pp. 601-700. Price, 15 cents.

The RECORD contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

NOTE.—Contain information, instructions, and notices of a regulatory nature. Issued monthly by certain bureaus. Free distribution limited to individuals, firms, establishments, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, at 5 cents each.

Bureau of Chemistry. May, 1914. Pp. 307-313. June 23, 1914.

Federal Horticultural Board. May, 1914. Pp. 23-28. June 20, 1914.

Insecticide and Fungicide Board. May, 1914. Pp. 51-59. June 26, 1914.

SOIL SURVEYS.

Soil Survey of Hamilton County, Indiana. By Lewis A. Hurst, of the U. S. Department of Agriculture, and E. J. Grimes, R. S. Hesler, and H. G. Young, of the

- Indiana Department of Geology. Pp. 32, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Tipton County, Indiana. By Lewis A. Hurst, of the U. S. Department of Agriculture, and E. J. Grimes, of the Indiana Department of Geology. Pp. 30, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Cherokee County, Kansas. By Percy O. Wood, of the U. S. Department of Agriculture, and R. I. Throckmorton, of the Kansas State Agricultural College. Pp. 42, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Greenwood County, Kansas. By W. C. Byers, of the U. S. Department of Agriculture, and N. S. Robb and J. P. Stack, of the Kansas State Agricultural College. Pp. 34, pls. 3, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Pender County, North Carolina. By W. Edward Hearn, Lewis A. Hurst, and R. B. Hardison, of the U. S. Department of Agriculture, and L. L. Brinkley and S. O. Perkins, of the North Carolina Department of Agriculture. Pp. 45, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of York County, Pennsylvania. By J. O. Veatch, Lewis A. Hurst, and Gustavus B. Maynadier. Pp. 95, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Kanawha County, West Virginia. By W. J. Latimer and M. W. Beck. Pp. 30, pls. 2, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

Flumes and Fluming. By Eugene S. Bruce, Expert Lumberman. Pp. 36, pls. 9, figs. 6. Contribution from the Forest Service. June 4, 1914. (Department Bulletin 87.) Price, 10 cents.

Discusses the use of flumes in lumbering operations and tells how to build them. Of especial value to lumbermen and log drivers.

Identification of Commercial Fertilizer Materials. By William H. Fry, Scientist in Soil Laboratory Investigations. Pp. 13. Contribution from the Bureau of Soils. (Professional Paper.) June 12, 1914. (Department Bulletin 97.) Price, 5 cents.

This bulletin gives methods for identifying the carriers of the various fertilizing ingredients, and is intended to serve as a laboratory guide to those studying this phase of the fertilizer question.

Tests of Selections from Hybrids and Commercial Varieties of Oats. By C. H. Warburton, Agronomist in Charge of Oat Investigations, and L. C. Burnett and H. H. Love, Collaborators, Office of Cereal Investigations (in cooperation with the Iowa and Cornell University Agricultural Experiment Stations). Pp. 25, figs. 6. Contribution from the Bureau of Plant Industry. June 8, 1914. (Department Bulletin 99.) Price, 5 cents.

This bulletin is intended for the use of farmers, agronomists, and cereal breeders, to whom the comparative data on selections from hybrids and commercial varieties should be of interest. It is adapted to the northern part of the United States as far west as the Missouri River.

The Molds of Cigars and Their Prevention. By R. H. True, Physiologist in Charge of Plant Physiological and Fermentation Investigations. Pp. 8. Contribution from the Bureau of Plant Industry. June 11, 1914. (Department Bulletin 109.) Price, 5 cents.

This paper discusses the losses due to the development of molds on cigars, outlines the studies directed toward the prevention of them, and presents practical directions for the use of an effective remedy. The molds were found to be introduced principally through the gum-tragacanth paste used to fasten the small flap at the head of the cigar.

New Facts Concerning the White-Pine Blister Rust. By Perley Spaulding, Pathological Inspector, Federal Horticultural Board. Pp. 8. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 24, 1914. (Department Bulletin 116.) Price, 5 cents.

This paper contains additional information concerning the white-pine blister rust that was collected during the season of 1913. It is of interest to foresters, tree experts, nurserymen, and owners of ornamental and forest plantations of 5-leaved pines.

Spinning Tests of Upland Long-Staple Cottons. By Fred Taylor, Cotton Technologist, and Wells A. Sherman, Assistant in Market Surveys. Pp. 20. Contribution from the Bureau of Plant Industry and the Office of Markets. June 24, 1914. (Department Bulletin 121.) Price, 5 cents.

This bulletin is a report of tests of Upland long-staple cotton as compared with Deltas of the 1912 crop. Of interest to spinners and growers of Upland cotton on the Atlantic slope.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction during the period from July 1 to September 30, 1912. Pp. 44, pls. 5. (Bureau of Plant Industry, Inventory No. 32. Nos. 34093 to 34339.) Price, 10 cents.

Revision of the American Harvest Mice. (Genus Reithrodontomys.) By Arthur H. Howell, Assistant Biologist, Biological Survey. Pp. 97, pls. 7, figs. 6. June 5, 1914. (North American Fauna No. 36.) Price, 20 cents.

FARMERS' BULLETINS.

Collection and Preservation of Plant Material for Use in the Study of Agriculture. By H. B. Derr, Agent and Agronomist, Bureau of Plant Industry, and C. H. Lane, Chief Specialist in Agricultural Education, Office of Experiment Stations. Pp. 24, figs. 16. Contribution from the Bureau of Plant Industry and the Office of Experiment Stations. June 3, 1914. (Farmers' Bulletin 586.)

This bulletin is designed for the use of rural teachers in all parts of the United States.

Economic Value of North American Skunks. By D. E. Lantz, Assistant Biologist. Pp. 22, figs. 10. Contribution from the Bureau of Biological Survey. June 4, 1914. (Farmers' Bulletin 587.)

This bulletin discusses the value of skunks to agriculture, as destroyers of rodents and injurious insects, their value as fur bearers, and the possibilities of raising them for their fur.

Economical Cattle Feeding in the Corn Belt. By J. S. Cotton, Agriculturist, Bureau of Plant Industry, and W. F. Ward, Senior Animal Husbandman in Beef Cattle Investigations, Bureau of Animal Industry. Pp. 19, figs. 6. Contribution from the Bureau of Animal Industry and the Bureau of Plant Industry. June 24, 1914. (Farmers' Bulletin 588.)

This bulletin is intended to promote cattle feeding on moderate-sized farms; it is suitable for distribution throughout the corn belt.

Stock-Watering Places on Western Grazing Lands. By Will C. Barnes, Inspector of Grazing. Pp. 27, figs. 3. Contribution from the Forest Service. June 11, 1914. (Farmers' Bulletin 592.)

This bulletin gives suggestions for the development and improvement of stock-watering places; it deals more especially with conditions found within the National Forests. It is intended for distribution throughout the range country.

How To Use Farm Credit. By T. N. Carver, Director, Rural Organization Service. Pp. 14. Contribution from the Rural Organization Service. June 3, 1914. (Farmers' Bulletin 593.)

This bulletin is intended to help farmers with the business side of their enterprises and is suitable for all sections of the country.

Shipping Eggs by Parcel Post. By Lewis B. Flohr, Scientific Assistant. Pp. 20, figs. 6. Contribution from Office of Markets. June 4, 1914. (Farmers' Bulletin 594.)

This bulletin presents conclusions from recent investigations made in cooperation with the Post Office Department. It contains matter which at the present time is arousing considerable public interest and furnishes information as to the use of the parcel post as a channel of communication between producer and consumer which will prove of value to every postmaster as well as to patrons of their offices.

Arsenate of Lead as an Insecticide Against the Tobacco Hornworms in the Dark-Tobacco District. By A. C. Morgan and D. C. Parman, Entomological Assistants, Southern Field Crop Investigations. Pp. 8, fig. 1. Contribution from the Bureau of Entomology. June 15, 1914. (Farmers' Bulletin 595.)

This bulletin is intended to assist the tobacco growers of Kentucky and Tennessee and the adjoining States in combating a troublesome pest.

The Culture of Winter Wheat in the Eastern United States. By Clyde E. Leighty, Agronomist in Charge of Eastern Wheat Investigations, Office of Cereal Investigations. Pp. 12, figs. 2. Contribution from the Bureau of Plant Industry. June 20, 1914. (Farmers' Bulletin 596.)

This bulletin gives directions for growing winter wheat in the eastern half of the United States, including small portions of eastern Nebraska, Kansas, Oklahoma, and Texas.

A New System of Cotton Culture and Its Application. By O. F. Cook, Bionomist in Charge of Crop Acclimatization and Adaptation Investigations. Pp. 12, figs. 2.

Contribution from the Bureau of Plant Industry. June 10, 1914. (Farmers' Bulletin 601.)

The bulletin advocates a radical departure from the present system and opens the way to many other improvements of cultural methods. The principle underlying the practice is the production of earlier fruiting branches, at the expense of the vegetative branches. Late thinning and leaving the plants close together in the rows, when practiced together, will secure an early short-season crop.

The Agricultural Outlook. Contribution from the Bureau of Statistics (Crop Estimates). June 23, 1914. Pp. 24. (Farmers' Bulletin 604.) Contents: General review of crop conditions, June 1, 1914—Crop conditions in Florida and California—Outlook for the 1914 foreign wheat crop—Progress of the world's wheat harvest—Trend of prices of farm products—Acreage, condition, and forecast of specified crops—The equivalent in yield per acre of 100 per cent conditions on July 1—Cotton condition May 25—Apple movement, 1913.

SEPARATES.

Bringing Applied Entomology to the Farmer. By F. M. Webster, in Charge of Cereal and Forage Insect Investigations, Bureau of Entomology. Pp. 75-92, pls. 6, figs. 4. (Separate 616, Yearbook 1913.) Price, 5 cents

Factors of Efficiency in Farming. By W. J. Spillman, Agriculturist in Charge of Farm Management Investigations, Bureau of Plant Industry. Pp. 93-108. (Separate 617, Yearbook 1913.) Price, 5 cents.

Promising New Fruits. By William A. Taylor, Chief of Bureau, and H. P. Gould, Pomologist in Charge of Fruit-Production Investigations, Bureau of Plant Industry. Pp. 109-124, pls. 8. (Separate 618, Yearbook 1913.) Price, 15 cents.

The American Thrushes Valuable Bird Neighbors. Compiled from data furnished by F. E. L. Beal, Biological Survey. Pp. 135-142, pls. 2. (Separate 620, Yearbook 1913.) Price, 10 cents.

What the Department of Agriculture Is Doing for the Housekeeper. By C. F. Langworthy, Chief of Nutrition Investigations, Office of Experiment Stations. Pp. 143-162. (Separate 621, Yearbook 1913.) Price, 5 cents.

Practical Tree Surgery. By J. Franklin Collins, Forest Pathologist, Bureau of Plant Industry. Pp. 163-190, pls. 7. (Separate 622, Yearbook 1914.) Price, 10 cents.

Supplementing Our Meat Supply with Fish. By M. E. Pennington, Chief, Food Research Laboratory, Bureau of Chemistry. Pp. 191-206. (Separates 623. Yearbook 1913.) Price, 5 cents.

Economic Waste From Soil Erosion. By R. O. E. Davis, Scientist in Laboratory Investigations, Bureau of Soils. Pp. 202-220, pls. 6. (Separate 624, Yearbook 1913.) Price, 5 cents.

The Grain Sorghums: Immigrant Crops that Have Made Good. By Carleton R. Ball, Agronomist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 221-238, pls. 7, figs. 8. (Separate 625, Yearbook 1913.) Price, 10 cents.

The Organization of Rural Interests. By T. N. Carver, Director Rural Organization Service. Pp. 239-258, figs. 4. (Separate 626, Yearbook 1913.) Price, 5 cents.

The Production of Beef in the South. By W. F. Ward, Senior Animal Husbandman in Beef-Cattle Investigations, Animal Husbandry Division, Bureau of Animal Industry. Pp. 259-282, pls. 4. (Separate 627, Yearbook 1913.) Price, 10 cents.

Hemp. By Lyster H. Dewey, Botanist in Charge of Fiber-Plant Investigations, Bureau of Plant Industry. Pp. 283-346, pls. 7, figs. 5. (Separate 628, Yearbook 1913.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

National Weekly Weather Bulletin Nos. 11, 12, 13, 14, 15, for June, 1914, reporting temperature and rainfall, with a summary of weather conditions throughout the United States. (Weekly April-September, Monthly remainder of year.) Price, 25 cents a year.

Jos. A. ARNOLD,
Editor and Chief Division of Publications.



This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., July 31, 1914.

MONTHLY LIST OF PUBLICATIONS.

[JULY, 1914.]

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SPECIAL NOTICE.

An increasing number of requests for publications are being received daily in this division with incomplete addresses. Many correspondents fail to sign their names. Some do not give post-office address. Persons living in large cities fail to furnish the street address; and some give as the post-office address the name of an office that has been discontinued for years. The department is unable to handle correspondence unless the signature is legible and the post-office address given in full, with street number or rural route number, as the case may be. Correspondents are therefore earnestly requested to see that the complete address is given in all communications addressed to this department.

REPORTS.

Field Operations of the Bureau of Soils, 1911. (Thirteenth Report.) By Milton Whitney, Chief. With accompanying papers by assistants in charge of field parties. Pp. 2356, pls. 27, figs. 61, maps 50 (in case). Price, \$6.00.

For distribution also by Senators, Representatives, and Delegates in Congress.

SERIALS.

Journal of Agricultural Research, Vol. II, No. 4, July, 1914. Contents: Identification of Species of Fusarium Occurring on the Sweet Potato, Ipomoea Batatas. By H. W. Wollenweber.—Mutation in Egyptian Cotton. By Thomas H. Kearney.—Influence of the Host on the Morphological Characters of Puccinia Ellisiana and Puccinia Andropogonis. By W. H. Long.—Ability of Streptococci to Survive Pasteurization. By S. Henry Ayers and William T. Johnson, jr. Pp. 251-330, pls. 12-25, figs. 3. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXX, No. 8, June, 1914. E. W. Allen, Ph. D., Editor. Pp. 701-800. Price, 15 cents.

Same, Vol. XXX, No. 9, Abstract Number. Pp. 801-900. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

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Bureau of Animal Industry. June, 1914. Pp. 81-92. July 24, 1914.

Bureau of Biological Survey. Regulations for the Protection of Deer, Moose, Caribou, Sheep, and Mountain Goats in Alaska. Pp. 2. July 21, 1914.

Bureau of Chemistry. June, 1914. Pp. 415-421. July 17, 1914.

Federal Horticultural Board. June, 1914. Pp. 29-46. July 17, 1914.

SOIL SURVEYS.

Soil Survey of Bradford County, Florida. By W. C. Byers, Arthur E. Taylor, J. B. R. Dickey, and N. M. Kirk. Pp. 36, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Gordon County, Georgia. By J. O. Veatch. Pp. 70, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Carroll County, Missouri. By E. S. Vanatta, of the U. S. Department of Agriculture, and L. V. Davis, of the University of Missouri. Pp. 34, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Miller County, Missouri. By H. G. Lewis, of the University of Missouri, and F. V. Emerson, of the U. S. Department of Agriculture. Pp. 28, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Jefferson County, Wisconsin. By W. J. Geib and A. H. Meyer, of the U. S. Department of Agriculture, and O. J. Noer, of the Wisconsin Geological and Natural History Survey. Pp. 58, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

A Bacteriological and Chemical Study of Commercial Eggs in the Producing Districts of the Central West. Under the direction of M. E. Pennington, Chief, Food Research Laboratory, associated with M. K. Jenkins, E. Q. St. John, and W. B. Hicks. Pp. 77, pls. 8, figs. 2. Contribution from the Bureau of Chemistry (Professional Paper.) July 20, 1914. (Department Bulletin 51.) Price, 40 cents.

This bulletin gives details of an extensive study of commercial eggs and makes recommendations for improvements in handling. While the study was made in the Central West, the bulletin is equally of interest to all sections where eggs are produced in commercial quantities and are sent to egg-breaking or other packing establishments.

Potash Salts and Other Salines in the Great Basin Region. By G. J. Young. Pp. 96, figs. 8. Contribution from the Bureau of Soils. (Professional Paper.) June 30, 1914. (Department Bulletin 61.) Price, 15 cents.

This bulletin embodies the results of investigations carried on in cooperation with the United States Geological Survey and the Mackay School of Mines, Reno, Nev., with a view to determining the existence or nonexistence of sources of potash salts in the basin region.

Insect Damage to the Cones and Seeds of Pacific Coast Conifers. By John M. Miller, Entomological Assistant, Forest Insect Investigations. Pp. 7, pls. 3. Contribution from the Bureau of Entomology. July 9, 1914. (Department Bulletin 95.) Price, 5 cents.

Information regarding insects that seriously affect forest seeds, especially in the coniferous forest of the Pacific coast. A practical paper, of interest to seed collectors, dealers in forest seeds, and planters of forest areas; of particular application to Pacific coast regions.

The Temperature of the Bee Colony. By Burton N. Gates, Ph. D., formerly Api-cultural Assistant, Bureau of Entomology. Pp. 29, figs. 8. Contribution from the Bureau of Entomology. (Professional Paper.) July 22, 1914. (Department Bulletin 96.) Price, 5 cents.

A study of the effects of temperature on bees, and of interest to beekeepers generally.

Acidity as a Factor in Determining the Degree of Soundness of Corn. By H. J. Besley and G. H. Baston, Assistants, Office of Grain Standardization. Pp. 45, pl. 1, figs. 33. Contribution from the Bureau of Plant Industry. (Professional Paper.) July 23, 1914. (Department Bulletin 102.) Price, 10 cents.

This bulletin shows how the acid test may be used in the commercial grading of corn; it is intended for chemists, grain buyers, and all who are interested in grading corn, more especially in the corn belt and at terminal markets.

Thrips as Pollinators of Beet Flowers. By Harry B. Shaw, Assistant Pathologist, Office of Cotton and Truck Diseases and Sugar-Plant Investigations. Pp. 12, pls. 3, figs. 3. (Department Bulletin 104.) Price, 5 cents.

The investigations and experiments reported in this bulletin are of interest to horticulturists and plant breeders.

Progress Reports of Experiments in Dust Prevention and Road Preservation, 1913. Pp. 46. Contribution from the Office of Public Roads. (Professional Paper.) July 10, 1914. (Department Bulletin 105.) Price, 5 cents.

This bulletin gives the details of construction of several sample roads constructed under the supervision of the Office of Public Roads. It is of interest to all sections where improvement of roads is contemplated or necessary.

Birds in Relation to the Alfalfa Weevil. By E. R. Kalmbach, Assistant Biologist. Pp. 64, pls. 5, figs. 3. Contribution from the Bureau of Biological Survey. (Professional Paper.) July 27, 1914. (Department Bulletin 107.) Price, 15 cents.

This bulletin discusses the food habits and economic status of birds, and of the toad, frog, and a few other vertebrate enemies of the alfalfa weevil in Utah.

The Sequoia Pitch Moth, A Menace to Pine in Western Montana. By Josef Brunner, Agent and Expert, Forest Insect Investigations. Pp. 11, figs. 5. Contribution from the Bureau of Entomology. (Professional Paper.) July 11, 1914. (Department Bulletin 111.) Price, 5 cents.

This bulletin is a report on an insect infesting lodgepole pine in the Rocky Mountain region of Montana.

Report Upon the Black and Boggy Swamps Drainage District, Hampton and Jasper Counties, South Carolina. By F. G. Eason, Drainage Engineer. Pp. 21, fig. 1, maps 2. Contribution from the Office of Experiment Stations. (Professional Paper.) July 13, 1914. (Department Bulletin 114.) Price, 15 cents.

This paper is intended for engineers and others interested in drainage enterprises in regions where the conditions are similar to those described; it is suitable for distribution in the South Atlantic States.

Profits in Farming on Irrigated Areas in Utah Lake Valley. By E. H. Thomson, Agriculturist, and H. N. Dixon, Scientific Assistant, Office of Farm Management. Pp. 21, figs. 7. Contribution from the Bureau of Plant Industry. July 24, 1914. (Department Bulletin 117.) Price, 5 cents.

This bulletin deals with the results of a farm-management survey of about 100 irrigated farms in Utah Lake Valley in Utah.

Experiments in the Destruction of Fly Larvæ in Horse Manure. By F. C. Cook, Physiological Chemist, Bureau of Chemistry; R. H. Hutchison, Scientific Assistant, Bureau of Entomology; and F. M. Scales, Assistant Mycologist, Bureau of Plant Industry. Pp. 26, pls. 4. Contribution from the Bureau of Entomology. (Professional Paper.) July 14, 1914. (Department Bulletin 118.) Price, 10 cents.

This bulletin reviews some recent experiments whose results point to an economical, practical, and effective way of destroying fly larvæ by chemically treating manure. It includes an account of the effects of certain larvicides on the value of manure, as estimated by chemical and bacteriological analyses.

FARMERS' BULLETINS.

Homemade Silos. By Helmer Rabild, A. K. Risser, and K. E. Parks, of the Dairy Division. Pp. 47, figs. 37. Contribution from the Bureau of Animal Industry. July 21, 1914. (Farmers' Bulletin 589.)

This bulletin gives detailed instructions for building three types of silos, namely, concrete, stave, and the modified Wisconsin silo. The part relating to the stave silo is a revision of Bureau of Animal Industry Circular 136, by B. H. Rawl and J. A. Conover.

The Classification and Grading of Cotton. By D. E. Earle, Cotton Technologist, and W. S. Dean, Assistant in Agricultural Technology, Office of Agricultural Technology and Cotton Standardization. Pp. 22, figs. 16. Contribution from the Bureau of Plant Industry. July 10, 1914. (Farmers' Bulletin 591.)

Names, classifies, and describes the different grades of cotton.

The Road Drag and How It Is Used. Pp. 15, figs. 8. Contribution from the Office of Public Roads. July 7, 1914. (Farmers' Bulletin 597.)

This bulletin contains instructions for constructing road drags and directions for their use in the repair and maintenance of earth, top-soil, sand-clay, and gravel roads.

Pasture and Grain Crops for Hogs in the Pacific Northwest. By Byron Hunter, Agriculturist, Office of Farm Management. Pp. 27, figs. 9. Contribution from the Bureau of Plant Industry. July 6, 1914. (Farmers' Bulletin 599.)

This publication, or reprint of Department Bulletin No. 68, issued February 25, 1914, is intended to encourage hog raising in the Pacific Northwest; it is especially adapted to Washington, Oregon, and Idaho.

An Outfit for Boring Taprooted Stumps for Blasting. By Harry Thompson, Agriculturist, Office of Farm Management. Pp. 5, figs. 4. Contribution from the Bureau of Plant Industry. July 11, 1914. (Farmers' Bulletin 600.)

This paper gives detailed information concerning a power outfit for boring taprooted stumps for blasting. In those sections of the country where such stumps are abundant it will be of value in reducing the cost of clearing land for agricultural purposes.

The Agricultural Outlook. Contributions from the Bureau of Crop Estimates. July 21, 1914. Pp. 38, figs. 2. (Farmers' Bulletin 611.)

Contents.—General Review of crop conditions, July 1, 1914—The wheat prospects—Outlook for the 1914 foreign wheat crop—Cotton acreage and condition, July 1—Tobacco report, by types and districts, 1914—Area of sugar beets planted, 1914—Marketing by parcel post—Car supply in relation to marketing the wheat crop of 1914—Acreage, condition, forecast, and prices of specified crops (tables).

SEPARATES.

Statistics of Principal Crops, 1913. Pp. 369–455. (Separate 630, Yearbook, 1913.) Price, 5 cents.

Live-Stock and Miscellaneous Statistics, 1913. Pp. 455–514. (Separate 631, Yearbook, 1913.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weather and Crop Bulletin, July 7, 14, 21, 28, 1914, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.)

NOTE.—The publication of the National Weather Bulletin in the single sheet form was discontinued with the issue of June 29, 1914. Hereafter this bulletin will appear in quarto form of eight or more pages, and in addition to the usual weather and crop information it will contain diagrams showing for the preceding weeks, from the beginning of the season, the temperature and precipitation conditions over the larger crop-growing areas, with departures from the normal values. The diagrams will likewise contain certain data showing the condition of the principal crops in these areas from month to month. These latter will be furnished by the Bureau of Crop Estimates, U. S. Department of Agriculture.

Jos. A. ARNOLD,
Editor and Chief Division of Publications.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., August 31, 1914.

MONTHLY LIST OF PUBLICATIONS.

[AUGUST, 1914.]

No publications are sold by the Department of Agriculture; therefore do not send money to this office.

Copies of any of the publications listed herein except the Journal of Agricultural Research and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

When this department's supply is exhausted publications can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

SPECIAL NOTICE.

An increasing number of requests for publications are being received daily in this division with incomplete addresses. Many correspondents fail to sign their names. Some do not give post-office addresses. Persons living in large cities fail to furnish the street address; and some give as the post-office address the name of an office that has been discontinued for years. The department is unable to handle correspondence unless the signature is legible and the post-office address given in full, with street number or rural route number, as the case may be. Correspondents are therefore earnestly requested to see that the complete address is given in all communications addressed to this department.

SERIALS.

Journal of Agricultural Research, Vol. II, No. 5, August, 1914. Contents: Fruit-Rot, Leaf-Spot, and Stem-Blight of the Eggplant, Caused by *Phomopsis Vexans*. By L. L. Harter.—Head Smut of Sorghum and Maize. By Alden A. Potter.—Oxidases in Healthy and in Curly-Dwarf Potatoes. By H. H. Bunzel. Pp. 331-404, pls. 26-37, figs. 29. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXXI, No. 1, July, 1914. E. W. Allen, Ph. D.; Editor. Pp. 1-100. Price, 15 cents.

Same, Vol. XXXI, No. 2, August, 1914. Pp. 101-200. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

NOTE.—Contain information, instructions, and notices of a regulatory nature. Issued monthly by certain bureaus. Free distribution limited to individuals, firms, establishments, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, at 5 cents each.

- Bureau of Animal Industry. July, 1914. Pp. 93-104. Aug. 17, 1914.
 Bureau of Chemistry. April, 1914, Supplement. Pp. 207-303. Aug. 3, 1914.
 Bureau of Chemistry. July, 1914. Pp. 523-530. Aug. 25, 1914.
 Federal Horticultural Board. July, 1914. Pp. 47-50. Aug. 15, 1914.
 Insecticide and Fungicide Board. June and July, 1914. Pp. 61-79. Aug. 20, 1914.

SOIL SURVEYS.

- Soil Survey of Miller County, Georgia. By Risden T. Allen and E. J. Grimes. Pp. 34, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
 Soil Survey of Jewell County, Kansas. By A. E. Kocher, of the U. S. Department of Agriculture, and J. P. Stack, E. H. Smies, and R. I. Throckmorton, of the Kansas State Agricultural College. Pp. 44, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
 Soil Survey of Pike County, Missouri. By A. T. Sweet, of the U. S. Department of Agriculture, and E. C. Hall, of the University of Missouri. Pp. 44, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

BULLETINS.

- Domestic Breeds of Sheep in America. By E. L. Shaw and L. L. Heller, Animal Husbandry Division. Pp. 59, pls. 28. Contribution from the Bureau of Animal Industry. Aug. 17, 1914. (Department Bulletin 94.) Price, 25 cents.
 This bulletin gives detailed information as to the origin, adaptability, distribution, distinguishing characteristics, etc., of the various domestic breeds of sheep. It is of especial interest to sheep breeders and to the sheep grower who is desirous of securing the best breed adapted to his particular locality.

- The Application of Refrigeration to the Handling of Milk. By John T. Bowen, Technologist, Dairy Division. Pp. 88, figs. 37. Contribution from the Bureau of Animal Industry. (Professional Paper.) Aug. 14, 1914. (Department Bulletin 98.) Price, 10 cents.

Discusses the application of refrigeration in the operation of the modern milk plant and describes the various forms of mechanical and other systems of cooling. Of interest to producers, shippers, dealers, and consumers of milk generally, and also to manufacturers of refrigeration machinery and appliances.

- Walnut Aphides in California. By W. M. Davidson, Scientific Assistant, Deciduous Fruit Insect Investigations. Pp. 48, pls. 4, figs. 18. Contribution from the Bureau of Entomology. (Professional Paper.) Aug. 31, 1914. (Department Bulletin 100.) Price, 10 cents.

Of interest to growers of English Walnuts in general.

- Harmful Effects of Aldehydes in Soils. By Oswald Schreiner and J. J. Skinner, Scientists in Soil Fertility Investigations. Pp. 26, pls. 8. Contribution from the Bureau of Soils. (Professional Paper.) Aug. 5, 1914. (Department Bulletin 108.) Price, 10 cents.

This bulletin deals with the discovery and properties of aldehydes in soils. These are shown to affect crops unfavorably and decrease the yield greatly. The results are of interest to agricultural experimenters and those practical farmers whose training interests them in the advance of scientific agriculture.

- Fattening Cattle in Alabama. By Dan T. Gray, Formerly Professor of Animal Husbandry, Alabama Polytechnic Institute, and W. F. Ward, Animal Husbandry Division. Pp. 41, figs. 4. Contribution from the Bureau of Animal Industry. Aug. 8, 1914. (Department Bulletin 110.) Price, 5 cents.

This bulletin is a report of progress on experiments begun in 1904 in cooperation with the Alabama Agricultural Experiment Station and reported in B. A. I. Bulletins Nos. 103, 131, 147, and 159, and Department Bulletin 73, and gives the results of work done during the last and two preceding years. It is applicable to those portions of the South where the climatic conditions and pasture grasses are similar to those in that section of the State where the tests were made.

The Oat Aphis. By J. J. Davis, Entomological Assistant, Cereal and Forest Insect Investigations. Pp. 16, figs. 9. Contribution from the Bureau of Entomology. Aug. 21, 1914. (Department Bulletin 112.) Price, 5 cents.

This bulletin describes an insect found on the small grains, more especially oats. The bulletin is of interest to growers of cereals.

The Lesser Bud-Moth. By E. W. Scott and J. H. Paine, Entomological Assistants, Deciduous Fruit Insect Investigations. Pp. 16, pls. 2, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) Aug. 22, 1914. (Department Bulletin 113.) Price, 5 cents.

Describes an imported insect which is very destructive to several kinds of growing fruit and has attained quite wide distribution throughout the Northeastern and North Central States.

The Inorganic Composition of Some Important American Soils. By W. O. Robinson, Scientist in Soil Laboratory Investigations. Pp. 27. Contribution from the Bureau of Soils. (Professional Paper.) Aug. 24, 1914. (Department Bulletin 122.) Price, 5 cents.

This bulletin gives the results of chemical and mineralogical investigations of certain important soils. The inorganic part alone is considered, and special attention is given to the so-called rare elements. It is technical and intended for the use of research workers in agricultural chemistry and teachers in the same field. It will also be found of secondary interest to practical agriculturists.

The Alfalfa Caterpillar. By V. L. Wildermuth, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 40, pls. 2, figs. 20. Contribution from the Bureau of Entomology. Aug. 28, 1914. (Department Bulletin 124.) Price, 10 cents.

This bulletin is especially applicable to the Southwest, where the alfalfa caterpillar occurs in destructive numbers in irrigated alfalfa fields.

Operating Costs of a Well-Established New York Apple Orchard. By G. H. Miller, Assistant, Office of Farm Management. Pp. 16, figs. 3. Contribution from the Bureau of Plant Industry. Aug. 21, 1914. (Department Bulletin 130.) Price, 5 cents.

This bulletin contains data on the cost of producing apples in a mature orchard operated in connection with a general farm in western New York. The information is applicable to all similar operations.

A Biometrical Study of Egg Production in the Domestic Fowl. III. Variation and Correlation in the Physical Characters of the Egg. By Raymond Pearl, Ph. D., Biologist, Maine Agricultural Experiment Station, and Frank Surface, Ph. D., Biologist, Maine Agricultural Experiment Station. Pp. vi+171-241, figs. 14. July 31, 1914. (Bulletin 110, Part 3, Bureau of Animal Industry.) Price, 10 cents.

Absorption of Fertilizer Salts by Hawaiian Soils. By Wm. McGeorge, Assistant Chemist. Pp. 32. Aug. 24, 1914. (Bulletin 35, Hawaii Experiment Station.) Price, 5 cents.

Directory of Officials and Organizations Concerned with the Protection of Birds and Game, 1914. Pp. 16. Aug. 22, 1914. (Biological Survey.)

The Pink Bollworm. By W. D. Hunter, In Charge of Southern Field Crop Insect Investigations, Bureau of Entomology. Pp. 6, figs. 5. Aug. 7, 1914. (Bureau of Entomology.) Price, 5 cents.

This circular gives information about an insect that damages cotton crops and whose importation into this country is to be guarded against. It is of especial interest to both cotton growers and manufacturers.

The Work of the Huntley Reclamation Project Experiment Farm in 1913. By Dan Hansen, Farm Superintendent. Pp. 14, figs. 5. Aug. 13, 1914. (Bureau of Plant Industry.)

The Work of the Truckee-Carson Reclamation Project Experiment Farm in 1913. By F. B. Headley, Farm Superintendent. Pp. 14, figs. 2. Aug. 8, 1914. (Bureau of Plant Industry.)

The Work of the Umatilla Reclamation Project Experiment Farm in 1913. By R. W. Allen, Collaborator. Pp. 14, figs. 4. Aug. 25, 1914. (Bureau of Plant Industry.)

FARMERS' BULLETINS.

Production of Clean Milk. Prepared in the Dairy Division. Pp. 18, figs. 6. Contribution from the Bureau of Animal Industry. Aug. 21, 1914. (Farmers' Bulletin 602.)

This bulletin is intended to be of special value to all persons engaged in the production of milk, and also to consumers who are interested in procuring clean, safe milk.

Arsenical Cattle Dips: Methods of Preparation and Directions for Use. By Robert M. Chapin, Senior Biochemist, Biochemic Division. Pp. 16, fig. 1. Contribution from the Bureau of Animal Industry. Aug. 14, 1914. (Farmers' Bulletin 603.)

Applicable only to that part of the United States infected with the Texas fever tick.

Collection and Preservation of Insects and Other Material for Use in the Study of Agriculture. By C. H. Lane, Chief Specialist in Agricultural Education, and Nathan Banks, Entomological Assistant. Pp. 18, figs. 15. Contribution from the Office of Experiment Stations and the Bureau of Entomology. Aug. 20, 1914. (Farmers' Bulletin 606.)

This bulletin is intended for the use of teachers in rural schools throughout the country.

Removal of Garlic Flavor from Milk and Cream. By S. Henry Ayers, Bacteriologist, and W. T. Johnson, Jr., Scientific Assistant, Dairy Division. Pp. 4, fig. 1. Contribution from the Bureau of Animal Industry. Aug. 6, 1914. (Farmers' Bulletin 608.)

Of interest to dairymen and milk dealers generally.

The Agricultural Outlook. Contribution from the Bureau of Crop Estimates. Aug. 22, 1914. Pp. 41, figs. 5. (Farmers' Bulletin 615.)

CONTENTS: General review of crop conditions, August 1, 1914—Outlook for 1914 foreign wheat crop—Cotton condition, July 1, 1914, with comparisons—Apple-crop forecast—Sugar-beet forecast—Durum-wheat exports—Trend of prices of farm products—Acreage, conditions, forecast, and prices of specified crops (tables)—Prices of farm products (tables).

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Bulletin of the Mount Weather Observatory, Vol. 6, Pt. 5 (Final Number). Pp. 195-265, pls. 3, figs. 36. (W. B. No. 532.) Aug. 20, 1914. Price, 25 cents.

National Weather and Crop Bulletin, August 4, 11, 18, 25, 1914, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.)

NOTE.—The publication of the National Weather Bulletin in the single sheet form was discontinued with the issue of June 29, 1914. Hereafter this bulletin will appear in quarto form of eight or more pages, and in addition to the usual weather and crop information it will contain diagrams showing for the preceding weeks, from the beginning of the season, the temperature and precipitation conditions over the larger crop-growing areas, with departures from the normal values. The diagrams will likewise contain certain data showing the condition of the principal crops in these areas from month to month. These latter will be furnished by the Bureau of Crop Estimates, U. S. Department of Agriculture.

JOS. A. ARNOLD,
Editor and Chief Division of Publications.

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United States Department of Agriculture,

WASHINGTON, D. C., September 30, 1914.

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[SEPTEMBER, 1914.]

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REPORTS.

Annual Report of Alaska Agricultural Experiment Stations for 1913. Pp. 80, pls. 15. Sept. 5, 1914. Price, 20 cents.

SERIALS.

Journal of Agricultural Research. Vol. II, No. 6. September, 1914. Contents: Birds as Carriers of the Chestnut-Blight Fungus. By F. D. Heald and R. A. Studhalter.—Density of Wood Substance and Porosity of Wood. By Frederick Dunlap.—Composition of Roquefort-Cheese Fat. By James N. Currie.—A New Sarco-phagid Parasite of Grasshoppers. By E. O. G. Kelly.—Papaya Fruit Fly. By Frederick Knab and W. W. Yothers.—Contents and Index of Volume II. Pp. 405-466, pls. 38-42, figs. 2. Price, 25 cents.

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Experiment Station Record, Vol. XXXI, No. 3. Abstract Number. E. W. Allen, Ph. D.; Editor. Pp. 201-300. Price, 15 cents.

Same, Vol. XXX, Index Number. Pp. 901-999. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

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Bureau of Chemistry. May, 1914, Supplement. Pp. 315-414. Sept. 11, 1914.

Federal Horticultural Board. August, 1914. Pp. 51-69. Sept. 25, 1914.

SOIL SURVEYS.

Soil Survey of Will County, Illinois. By Charles J. Mann and Mark Baldwin. Pp. 37, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Surveys of Orange County, New York. By G. A. Crabb, of the U. S. Department of Agriculture, and T. M. Morrison, of the New York State College of Agriculture. Pp. 56, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.

Soil Survey of Bamberg County, South Carolina. By W. E. McLendon. Pp. 40, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

BULLETINS.

Effects of Certain Cooking Conditions in Producing Soda Pulp from Aspen. By Henry E. Surface, Engineer in Forest Products, Forest Products Laboratory. Pp. 63, pls. 9, figs. 20. Contribution from the Forest Service. (Professional Paper.) Aug. 31, 1914. (Department Bulletin 80.) Price, 15 cents.

This paper presents detailed information of value in experimental work in the laboratory and in promoting the efficiency of commercial paper-making plants employing the soda process.

Relative Resistance of Various Conifers to Injection with Creosote. By C. H. Teesdale, Engineer in Forest Products, Forest Products Laboratory. Pp. 43, pls. 8, figs. 9. Contribution from the Forest Service. (Professional Paper.) Sept. 25, 1914. (Department Bulletin 101.) Price, 15 cents.

The purpose of this bulletin is to show how woods should be graded in order that they may give uniform results when subjected to treatment with preservatives; it is intended for those interested in wood preservation.

The Granular Venereal Disease and Abortion in Cattle. By W. L. Williams, Professor of Surgery, Veterinary Department, Cornell University. Pp. 57, figs. 2. Contribution from the Bureau of Animal Industry. (Professional Paper.) Sept. 12, 1914. (Department Bulletin 106.) Price, 10 cents.

This bulletin describes a very common affection of breeding cattle, as to which there is a wide diversity of opinion. The paper is the result of extensive study and is of interest to veterinarians and cattle raisers generally.

Gate Structures for Irrigation Canals. By Fred C. Scobey, Irrigation Engineer, Irrigation Investigations. Pp. 61, pls. 12, figs. 18. Contribution from the Office of Experiment Stations. (Professional Paper.) Sept. 1, 1914. (Department Bulletin 115.) Price, 20 cents.

This paper will be of interest to engineers and directors of farmers' canal companies in the irrigated sections of the West.

Five Oriental Species of Beans. By C. V. Piper, Agrostologist in Charge, and W. J. Morse, Scientific Assistant, Forage-Crop Investigations. Pp. 32, pls. 7. Contribution from the Bureau of Plant Industry. (Professional Paper.) Sept. 2, 1914. (Department Bulletin 119.) Price, 10 cents.

This bulletin describes the adzuki bean, the rice bean, the mung bean, the urd, and the moth bean; it is of interest to botanists.

Apple Powdery Mildew and Its Control in the Pajaro Valley. By W. S. Ballard, Pathologist, Fruit-Disease Investigations, and W. H. Volck, County Horticultural Commissioner of Santa Cruz County, California. Pp. 26, pls. 6, figs. 5. Contribution from the Bureau of Plant Industry. Sept. 3, 1914. (Department Bulletin 120.) Price, 10 cents.

This bulletin is intended to assist apple growers in dealing with a fungous disease which is becoming a serious menace to their industry. It is suitable for distribution in the apple-growing sections west of the Rocky Mountains and in certain limited areas east of the Rocky Mountains, as shown on the map.

The Mycogone Disease of Mushrooms and Its Control. By F. J. Veihmeyer, Formerly Scientific Assistant in the Office of Pathological Collections and Inspection Work. Pp. 24, pls. 3, figs. 5. Contribution from the Bureau of Plant Industry. (Professional Paper.) Sept. 16, 1914. (Department Bulletin 127.) Price, 10 cents.

This bulletin describes a disease of mushrooms which causes great losses to growers and gives methods of control. Of interest to mushroom growers generally.

Distribution and Migration of North American Rails and Their Allies. By Wells A. Cooke, Assistant Biologist. Pp. 50, figs. 19. Contribution from the Bureau of Biological Survey. Sept. 25, 1914. (Department Bulletin 128.) Price, 10 cents.

This bulletin aims to give precise information as to the ranges of the several species of North American rails and their allies, the cranes, gallinules, coots, and others, especially in regard to breeding ranges and migrations; and to furnish data sufficient to serve as a basis for protective legislation for the species by States in which they are found.

Yields from the Destructive Distillation of Certain Hardwoods. By L. F. Hawley and R. C. Palmer, Chemists in Forest Products. Pp. 16, figs. 3. Contribution from the Forest Service. (Professional Paper.) Sept. 10, 1914. (Department Bulletin 129.) Price, 5 cents.

Gives results of experiments in destructive distillation of hardwoods. Of interest to manufacturers of by-products.

Repellents for Protecting Animals from the Attacks of Flies. By H. W. Graybill, D. V. M., Assistant Zoologist, Zoological Division, Bureau of Animal Industry. Pp. 26. Contribution from the Bureau of Entomology. Sept. 10, 1914. (Department Bulletin 131.) Price, 5 cents.

Contains data concerning substances which may be applied to live stock to protect them from flies, and is of interest and value to the live-stock industry.

Experiments With Crops Under Fall Irrigation at the Scottsbluff Reclamation Project Experiment Farm. By Fritz Knorr, Farm Superintendent, Western Irrigation Agriculture. Pp. 17, figs. 5. Contribution from the Bureau of Plant Industry. Sept. 16, 1914. (Department Bulletin 133.) Price, 5 cents.

The results of a 3-year experiment reported in this bulletin indicate that fall irrigation in the irrigated sections of the Great Plains area produces an increase in yield of field crops more than compensating for the cost.

Experiments in the Production of Crops on Alkali Land on the Huntley Reclamation Project, Montana. By Dan Hansen, Farm Superintendent, Office of Western Irrigation Agriculture. Pp. 19, figs. 7. Contribution from the Bureau of Plant Industry. Sept. 10, 1914. (Department Bulletin 135.) Price, 5 cents.

Gives results of different systems of cropping used to reclaim the alkali land on this project.

Commercial Turkestan Alfalfa Seed. By Edgar Brown, Botanist in Charge of Seed Laboratory. Pp. 6, fig. 1. Contribution from the Bureau of Plant Industry. Sept. 19, 1914. (Department Bulletin 138.) Price, 5 cents.

This bulletin is intended to warn American alfalfa growers to avoid the use of commercial Turkestan seed, which, though inferior to domestic-grown seed, is retailed at a higher price, making greater profits for the dealers. The bulletin tells how this cheapest of all alfalfa seeds in the European market can be identified.

Economic Conditions in the Sea Island Cotton Industry. By William R. Meadows, Cotton Technologist. Pp. 18. Contribution from the Office of Markets. Sept. 25, 1914. (Department Bulletin 146.) Price, 5 cents.

This bulletin discusses the economic conditions in the Sea Island cotton industry in South Carolina and the islands off the coast and also in portions of Georgia and Florida.

Experiments in Crop Production on Fallow Land at San Antonio. By C. R. Letteer, Assistant, Office of Western Irrigation Agriculture. Pp. 10, figs. 4. Contribution from the Bureau of Plant Industry. Sept. 19, 1914. (Department Bulletin 151.) Price, 5 cents.

A report on investigations with corn, cotton, and oats. On land cropped annually and on fallowed land cropped biennial near San Antonio, Tex., in which the latter was found not to be best in that section.

Classification of the Aleyrodidae. Part II. By A. L. Quaintance, In Charge of Deciduous Fruit Insect Investigations, and A. C. Baker, Expert. Pp. iv+95-109, pls. 35-48. Sept. 9, 1914. (Technical Series No. 27, Part II, Bureau of Entomology.) Price, 15 cents.

The effect of Strongly Calcareous Soils on the Growth and Ash Composition of Certain Plants. By P. L. Gile, Chemist, and C. N. Ageton, Assistant Chemist. Pp. 45, pls. 4. Sept. 17, 1914. (Bulletin 16, Porto Rico Agricultural Experiment Station.) Price, 10 cents.

The Work of the Belle Fourche Reclamation Project Experiment Farm in 1913. By Beyer Aune, Farm Superintendent. Pp. 19, figs. 4. Sept. 8, 1914. (Bureau of Plant Industry.)

This circular is principally for distribution to the farmers of the Belle Fourche Reclamation Project in order that they may be informed as to the various experiments in progress at the farm and as to the methods of producing the different irrigated crops.

The Work of the San Antonio Experiment Farm in 1913. By S. H. Hastings, Farm Superintendent. Pp. 15, figs. 5. Sept. 9, 1914. (Bureau of Plant Industry.)

The Work of the Scottsbluff Reclamation Project Experiment Farm in 1913. By Fritz Knorr, Farm Superintendent. Pp. 19, figs. 5. Sept. 18, 1914. (Bureau of Plant Industry.)

The Work of the Yuma Reclamation Project Experiment Farm in 1913. By R. E. Blair, Farm Superintendent. Pp. 18, figs. 6. Sept. 12, 1914. (Bureau of Plant Industry.)

FARMERS' BULLETINS.

Sudan Grass as a Forage Crop. By H. N. Vinall, Agronomist, Office of Forage-Crop Investigations. Pp. 20, figs. 10. Contribution from the Bureau of Plant Industry. Sept. 2, 1914. (Farmers' Bulletin 605.)

Demands for information regarding this new hay plant have come from nearly every section of the United States, but more especially from the Southern States, where the need of a desirable hay grass has been acute since the advent of the boll weevil forced diversification of crops. This bulletin is designed to meet this demand by making available the information at hand.

Bird Houses and How to Build Them. By Ned Dearborn, Assistant Biologist. Pp. 19, figs. 48. Contribution from the Bureau of Biological Survey. Sept. 11, 1914. (Farmers' Bulletin 609.)

This bulletin is intended to encourage the protection and study of birds; it is suitable for distribution in all sections of the United States.

Wild Onion: Methods of Eradication. By H. R. Cox, Agriculturist, Office of Farm Management. Pp. 8, figs. 7. Contribution from the Bureau of Plant Industry. Sept. 9, 1914. (Farmers' Bulletin 610.)

This bulletin describes methods for eradicating the weed that is responsible for the "garlicky" taste and odor found in some milk and butter and in some bread, and is of especial interest to farmers and dairymen in the Atlantic coast region and as far inland as Missouri. The subject matter is based on and is an enlargement of the Bureau of Plant Industry circular (Doc. No. 416) entitled "The Wild Onion," by J. S. Cates and H. R. Cox.

The Agricultural Outlook. Contribution from the Bureau of Crop Estimates. Sept. 16, 1914. Pp. 39, figs. 5. (Farmers' Bulletin 620.)

CONTENTS.—General review of crop conditions, September 1, 1914—Cotton condition, August 25, 1914, with comparisons—Trend of prices of farm products—Florida and California crop report—Honey production—Conference on the cotton marketing situation—The hog supply—The apple crop—The 1914 crops in England—Condition, production, forecast, and prices of specified crops (tables)—Prices of farm products (tables)—The equivalent in yield per acre of 100 per cent condition on October 1—Crop conditions September 1, 1914, chart—Temperature and precipitation, charts.

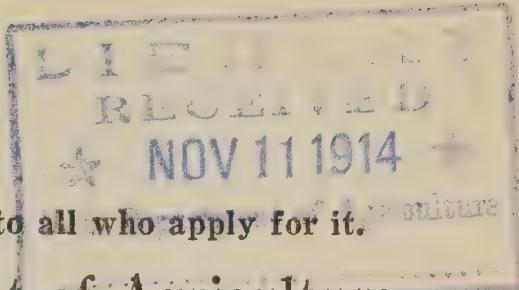
PUBLICATIONS OF THE WEATHER BUREAU.

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National Weather and Crop Bulletin, September 1, 8, 15, 22, 29, 1914, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.)

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Jos. A. ARNOLD,
Editor and Chief Division of Publications.



This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., October 31, 1914.

MONTHLY LIST OF PUBLICATIONS.

[OCTOBER, 1914.]

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SERIALS.

Journal of Agricultural Research. Vol. 3, No. 1. October, 1914. Contents: Relative Water Requirements of Plants. By L. J. Briggs and H. L. Shantz.—Heart-Rot of Oaks and Poplars Caused by Polyporus Dryophilus. By George G. Hedgecock and W. H. Long.—Decomposition of Soil Carbonates. By W. H. MacIntire.—A Fungous Disease of Hemp. By Vera K. Charles and Anna E. Jenkins.—A More Accurate Method of Comparing First-Generation Maize Hybrids with Their Parents. By G. N. Collins. Pp. 1-91, pls. i-xi, figs. 2. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXXI, No. 4, September, 1914. E. W. Allen, Ph. D.; Editor. Pp. 301-400. Price, 15 cents.

Experiment Station Record, Vol. XXXI, No. 5. October, 1914. E. W. Allen, Ph. D., Editor. Pp. 401-496. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

SERVICE AND REGULATORY ANNOUNCEMENTS.

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Bureau of Chemistry. June, 1914, Supplement. Pp. 423-521. Oct. 28, 1914.

Bureau of Chemistry. August, 1914. Pp. 631-636. Oct. 2, 1914.

Bureau of Chemistry. September, 1914. Pp. 687-689. Oct. 21, 1914.

Federal Horticultural Board. September, 1914. Pp. 71-72. Oct. 23, 1914.

SOIL SURVEYS.

Soil Survey of Pinellas County, Florida. By Grove B. Jones and T. M. Morrison. Pp. 31, pls. 6, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Talbot County, Georgia. By R. A. Winston and H. W. Hawker. Pp. 40, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Cass County, Nebraska. By A. H. Meyer, E. H. Smies, and T. M. Bushnell, of the U. S. Department of Agriculture, and R. J. Scarborough, P. W. Smith, R. R. Burn, and R. R. Spafford, of the Nebraska Soil Survey. Pp. 46, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Henrico County, Virginia. By W. J. Latimer and M. W. Beck. Pp. 38, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Forsyth County, North Carolina. By Risden T. Allen, of the U. S. Department of Agriculture, and R. C. Journey, of the North Carolina Department of Agriculture. Pp. 28, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

BULLETINS.

Concrete Lining as Applied to Irrigation Canals. By Samuel Fortier, Chief of Irrigation Investigations. (Professional Paper.) October 31, 1914. (Department Bulletin 126.) Price, 10 cents.

This bulletin treats of the subject of concrete lining for irrigation canals from the standpoints of economy, design, and construction. It is intended for the use of irrigation engineers and the managers and superintendents of irrigation systems.

Citrus Fruit Insects in the Mediterranean Countries. By H. J. Quayle. Pp. 35, pls. 10, figs. 2. Contribution from the Bureau of Entomology. (Professional Paper.) Oct. 7, 1914. (Department Bulletin 134.) Price, 15 cents.

Of interest and value to importers and growers of citrus fruits.

Some Distinction in Our Cultivated Barleys with Reference to Their Use in Plant Breeding. By Harry V. Harlan, Agronomist in Charge of Barley Investigations, Office of Cereal Investigations. Pp. 38, figs. 76. Contribution from the Bureau of Plant Industry. (Professional paper.) Oct. 16, 1914. (Department Bulletin 137.) Price, 5 cents.

A large part of the data herein presented was obtained in cooperation with the Minnesota Agricultural Experiment Station, and the article itself was submitted as a thesis as required for the degree of doctor of science in the University of Minnesota. The subject is of interest to plant breeders and agronomists.

Principal Poisonous Plants of the Western Stock Ranges. By C. D. Marsh, Physiologist, Drug-Plant and Poisonous-Plant Investigations, Bureau of Plant Industry. Pp. 13, pls. 6. Oct. 31, 1914. Price, 10 cents.

How to use Anti-Hog-Cholera Serum. Pp. 5. (Reprinted from Farmers' Bulletin 590.) Bureau of Animal Industry.

FARMERS' BULLETINS.

The Farm Kitchen as a Workshop. By Anna Barrows. Pp. 20, figs. 6. Contribution from the Office of Experiment Stations. Oct. 8, 1914. (Farmers' Bulletin 607.)

This bulletin is of interest to farm women throughout the country.

Golden Seal Under Cultivation. By Walter Van Fleet, Physiologist, Drug-Plant and Poisonous-Plant Investigations. Pp. 15, figs. 5. Contribution from the Bureau of Plant Industry. Oct. 26, 1914. (Farmers' Bulletin 613.)

This bulletin is of interest to residents of Ohio, West Virginia, Kentucky, and adjoining States.

School Lessons on Corn. By C. H. Lane, Chief Specialist in Agricultural Education, Office of Experiment Stations. Pp. 14, figs. 5. Contribution from the Office of Experiment Stations. Oct. 22, 1914. (Farmers' Bulletin 617.)

Furnishes elementary lessons on corn and is of interest to rural-school teachers in all parts of the United States.

Leaf-Spot, A Disease of the Sugar-Beet. By C. O. Townsend, Pathologist in Charge of Sugar-Beet Investigations. Pp. 18, figs. 10. Contribution from the Bureau of Plant Industry. Oct. 8, 1914. (Farmers' Bulletin 618.)

A description of leaf-spot, a widespread disease of the sugar-beet, its reproduction, distribution, injurious effects, and methods of control are presented in this bulletin.

Game Laws for 1914. A Summary of the Provisions Relating to Seasons, Export, Sale, Limits, and Licenses. By T. S. Palmer, W. F. Bancroft, and Frank L. Earnshaw, Assistants, Biological Survey. Pp. 54, figs. 3. Contribution from the Bureau of Biological Survey. Oct. 20, 1914. (Farmers' Bulletin 628.)

The Agricultural Outlook. Contribution from the Bureau of Crop Estimates. Oct. 16, 1914. Pp. 35, figs. 5. (Farmers' Bulletin 629.)

CONTENTS.—General review of crop conditions, October 1, 1914—The wheat crop of 1913-14—The "world" wheat crop in 1914—The cotton crop—Sugar-beet forecast—Trend of prices of farm products—Condition, production, forecast, and prices of specified crops (tables)—Prices of farm products (tables).

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REPORTS.

Annual Report of the Secretary of Agriculture, 1914. Pp. 48.

Annual Report of the Chief of the Division of Accounts and Disbursements, 1914. Pp. 2.

Annual Report of the Chief of the Bureau of Animal Industry, 1914. Pp. 44.

Annual Report of Chief of Bureau of Biological Survey, 1914. Pp. 12.

Annual Report of the Chemist, 1914. Pp. 10.

Annual Report of the Editor, 1914. Pp. 19.

Annual Report of the Entomologist, 1914. Pp. 16.

Annual Report of the Director of the Office of Experiment Stations, 1914. Pp. 15.

Annual Report of the Federal Horticultural Board, 1914. Pp. 11.

Annual Report of the Forester, 1914. Pp. 36.

Annual Report of the Insecticide and Fungicide Board, 1914. Pp. 4.

Annual Report of the Librarian, 1914. Pp. 9.

Annual Report of the Chief of the Office of Markets, 1914. Pp. 11.

- Annual Report of the Chief of the Bureau of Plant Industry, 1914. Pp. 28.
- Annual Report of the Director of the Office of Public Roads, 1914. Pp. 12.
- Annual Report of the Solicitor, 1914. Pp. 20.
- Annual Report of the Chief of the Bureau of Soils, 1914. Pp. 8.
- Annual Report of the Bureau of Statistics (Crop Estimates), 1914. Pp. 12.
- Annual Report of the Chief of the Weather Bureau, 1914. Pp. 8.

SERIALS.

Journal of Agricultural Research. Vol. 3. No. 2. November, 1914. Contents: Natural Revegetation of Range Lands Based upon Growth Requirements and Life History of the Vegetation. By Arthur W. Sampson.—Pecan Rosette. By W. A. Orton and Frederick V. Rand.—A Nitrogenous Soil Constituent. By Edmund C. Shorey and E. H. Walters.—Apple Root Borer. By F. E. Brooks. Pp. 93-186, pls. xii-xxx, figs. 6. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

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- Bureau of Animal Industry. September, 1914. Pp. 121-132. Nov. 6, 1914.
- Bureau of Animal Industry. October, 1914. Pp. 133-146. Nov. 20, 1914.
- Bureau of Chemistry. October, 1914. Pp. 741-750. Nov. 25, 1914.
- Federal Horticultural Board. October, 1914. Pp. 73-80. Nov. 30, 1914.
- Insecticide and Fungicide Board. August and September, 1914. Pp. 81-91. Nov. 12, 1914.

SOIL SURVEYS.

- Soil Survey of Jeff Davis County, Georgia. By Percy O. Wood, W. J. Latimer, H. C. Goodrich, and E. C. Hall. Pp. 34, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Soil Survey of Bremer County, Iowa. By Mark Baldwin and E. B. Watson, of the U. S. Department of Agriculture, and F. B. Howe, of the Iowa Agricultural Experiment Station. Pp. 37, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Soil Survey of Ralls County, Missouri. By A. T. Sweet, of the U. S. Department of Agriculture, and W. I. Watkins, of the University of Missouri. Pp. 41, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Soil Survey of Stoddard County, Missouri. By A. T. Sweet and Floyd S. Bucher, of the U. S. Department of Agriculture, and H. H. Krusekopf, H. G. Lewis, J. E. Dunn, E. C. Hall, and L. V. Davis of the University of Missouri. Pp. 28, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Reconnaissance Soil Survey of Southeastern Pennsylvania. By Charles F. Shaw, of the U. S. Department of Agriculture, and J. M. McKee and W. G. Ross, of the Pennsylvania State College. Pp. 100, fig. 1, map. (From F. O. Soils, 1912.) Price, 15 cents.
- Soil Survey of Union County, South Carolina. By Clarence Lounsbury, W. E. McLendon, and J. A. Kerr. Pp. 36, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

BULLETINS.

- The Production and Fertilizer Value of Citric-Soluble Phosphoric Acid and Potash. By William H. Waggaman, Scientist in Investigation of Fertilizer Resources. Pp. 12. Contribution from the Bureau of Soils. (Professional Paper.) Nov. 13, 1914. (Department Bulletin 143.) Price, 5 cents.

This paper gives the results of experiments to determine the fertilizing value of a slag made from a mixture of phosphate rock and feldspar; it is of value to all those who are interested in the investigation of fertilizing materials.

The Nitrogen of Processed Fertilizers. By Elbert C. Lathrop, Scientist in Soil Fertility Investigations. Pp. 24. Contribution from the Bureau of Soils. (Professional Paper.) Nov. 10, 1914. (Department Bulletin 158.) Price, 5 cents.

This investigation is a contribution to the knowledge of the nature of the changes brought about in the manufacture of some of the processed fertilizers, and of the character and availability of such processed goods in mixed fertilizers when used in farm practice.

Papers on Aphididae: The Yellow Clover Aphis. By J. J. Davis, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. iv+17-40, pls. 1, figs. 6. Nov. 12, 1914. (Technical Series No. 25, Part 2, Bureau of Entomology.) Price, 5 cents.

FARMERS' BULLETINS.

A Corn-Belt Farming System Which Saves Harvest Labor by Hogging Down Crops. By J. A. Drake, Agriculturist, Office of Farm Management. Pp. 16, figs. 7. Contribution from the Bureau of Plant Industry. Nov. 13, 1914. (Farmers' Bulletin 614.)

This bulletin is of interest to farmers in the corn-belt States.

Breeds of Draft Horses. By G. Arthur Bell, Senior Animal Husbandman. Animal Husbandry Division. Pp. 16, figs. 10. Contribution from the Bureau of Animal Industry. Nov. 16, 1914. (Farmers' Bulletin 619.)

The respective characteristics and desirable qualities of the several breeds of draft horses in this country are presented in this bulletin.

Natural and Artificial Brooding of Chickens. By Harry M. Lamon, Senior Animal Husbandman in Poultry Investigations, Animal Husbandry Division. Pp. 14, figs. 10. Contribution from the Bureau of Animal Industry. Nov. 30, 1914. (Farmers' Bulletin 624.)

Practical instructions in both natural and artificial brooding of chickens are contained in this bulletin.

The Agricultural Outlook. Contribution from the Bureau of Crop Estimates. Nov. 23, 1914. Pp. 40, fig. 1. (Farmers' Bulletin 641.)

CONTENTS: Crop Review, November 1, 1914.—Preliminary estimates of sugar beets and beet sugar, 1914.—Hops consumption.—Trend of prices of farm products.—The world's wheat.—The cotton crop surplus.—Cost of producing cotton.—Relative production of apple varieties.—Food production and requirements of various countries.—International Institute of Agriculture's crop report.—Prices of farm products (tables).—Yield indications Nov. 1, 1914 (chart).

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SERIALS.

Journal of Agricultural Research. Vol. 3, No. 3. December, 1914. Contents: Changes in Composition of Peel and Pulp of Ripening Bananas. By H. C. Gore.—Assimilation of Colloidal Iron by Rice. By P. L. Gile and J. O. Carrero.—Coloring Matter of Raw and Cooked Salted Meats. By Ralph Hoagland.—Oil Content of Seeds as Affected by the Nutrition of the Plant. By W. W. Garner, H. A. Allard, and C. L. Foubert.—Studies in the Expansion of Milk and Cream. By H. W. Bearce.—Life History of the Melon Fly. By E. A. Back and C. E. Pemberton.—Identification of the Seeds of Species of Agropyron. By Robert C. Dahlberg. Pp. 187-282, pls. xxxii-xxxvii, figs. 4. Price, 25 cents.

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Experiment Station Record, Vol. XXXI, No. 6. Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

Same, Vol. XXXI, No. 7, November, 1914. Pp. 601-700. Price, 15 cents.

Same, Vol. XXXI, No. 8, December, 1914. Pp. 701-800. Price, 15 cents.

Same, Vol. XXXI, No. 9, Abstract Number. Pp. 801-900. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

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Bureau of Animal Industry. November, 1914. Pp. 147-156. Dec. 23, 1914.

Bureau of Chemistry. November, 1914. Pp. 751-752. Dec. 31, 1914.

Federal Horticultural Board. November, 1914. Pp. 81-85. Dec. 23, 1914.

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SOIL SURVEYS.

Soil Survey of Habersham County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and E. C. Hall, of the U. S. Department of Agriculture. Pp. 48, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Jones County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and G. A. Crabb, L. L. Brinkley, Riden T. Allen, and E. J. Grimes, of the U. S. Department of Agriculture. Pp. 44, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

BULLETINS.

Cereal Experiments at Dickinson, North Dakota. By J. Allen Clark, Scientific Assistant, Office of Cereal Investigations. Pp. 44, pl. 1, figs. 7. Contribution from the Bureau of Plant Industry. Dec. 17, 1914. (Department Bulletin 33.) Price, 10 cents.

This bulletin is of interest to agronomists and cereal breeders generally, and to farmers in the northern Great Plains States.

Inland Boat Service: Freight Rates on Farm Products and Time of Transit on Inland Waterways in the United States. By Frank Andrews, Chief, Division of Crop Records. Pp. 36. Contribution from the Bureau of Crop Estimates and the Office of Markets. Dec. 12, 1914. (Department Bulletin 74.) Price, 5 cents.

A discussion of the transportation of farm products by inland water carriers and statistics of operations in September and October, 1912, are contained in this bulletin.

Norway Pine in the Lake States. By Theodore S. Woolsey, jr., Assistant District Forester, District 3, and Herman H. Chapman, Professor, Yale Forest School. Pp. 42, pls. 6. Contribution from the Forest Service. (Professional Paper.) Dec. 4, 1914. (Department Bulletin 139.) Price, 10 cents.

The manuscript describes the life history of the Norway pine, its requirement upon soil, moisture, and climate, its rate of growth and yield, and the best methods for its management.

The Clyde Series of Soils. By J. A. Bonsteel, Scientist in the Soil Survey. Pp. 60, pls. 10. Contribution from the Bureau of Soils. Dec. 17, 1914. (Department Bulletin 141.) Price, 15 cents.

This bulletin discusses the origin, characteristics, and uses of the Clyde series of soils; it is suitable for distribution in New York, Ohio, Indiana, Michigan, and Wisconsin.

The Miami Series of Soils. By J. A. Bonsteel, Scientist in the Soil Survey. Pp. 59, pls. 13. Contribution from the Bureau of Soils. Dec. 29, 1914. (Department Bulletin 142.) Price, 15 cents.

This bulletin is of interest to those engaged or desirous of engaging in farming in the North Central States.

The Manufacture of Acid Phosphate. By William H. Waggaman, Scientist in Fertilizer Investigations. Pp. 28, pls. 5. Contribution from the Bureau of Soils. Dec. 24, 1914. (Department Bulletin 144.) Price, 10 cents.

Describes the manufacture of acid phosphate from phosphate rock, detailing the chemical and mechanical changes involved. Of interest to fertilizer manufacturers generally.

The Use of Radioactive Substances as Fertilizers. By William H. Ross, Scientist in Soil Laboratory Investigations. Pp. 14. Contribution from the Bureau of Soils. Dec. 11, 1914. (Department Bulletin 149.) Price, 5 cents.

This bulletin discusses the fertilizer value of radioactive materials; it is suitable for distribution in any part of the United States.

Wood Pipe for Conveying Water for Irrigation. By S. O. Jayne, Irrigation Manager. Pp. 40, pls. 4, figs. 7. Contribution from the Office of Experiment Stations. (Professional Paper.) Dec. 23, 1914. (Department Bulletin 155.) Price, 10 cents.

This bulletin will be of interest to irrigation engineers, owners of irrigation works, water power companies, and water departments of municipalities.

The Mediterranean Fruit Fly in Bermuda. By E. A. Back, Entomological Assistant, Mediterranean Fruit Fly Investigations. Pp. 8. Contribution from the Bureau of Entomology. Dec. 18, 1914. (Department Bulletin 161.) Price, 5 cents.

This bulletin discusses the history of the fly in Bermuda, the life history of the insect, and the possibility of eradicating it from Bermuda; the bulletin is of interest to entomologists.

Quassia as a Contact Insecticide. By William B. Parker, Entomological Assistant, Bureau of Entomology. Pp. 8, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 31, 1914. (Department Bulletin 165.) Price, 5 cents.

The results of an investigation to determine the most suitable solution of quassia for use as a spray for the control of the hop aphid are discussed in this bulletin.

The Dasheen, A Root Crop for the South. By Robert A. Young, Botanical Assistant, Foreign Seed and Plant Introduction, Bureau of Plant Industry. Pp. 10, pls. 3. Dec. 5, 1914. (B. P. I. No. 1110.)

This paper deals with experiments in the cultivation of the dasheen, and in the cooking and preparation of the tubers for the table.

Single-Stalk cotton Culture. By O. F. Cook, Bionomist in Charge, Crop Acclimatization and Adaptation Investigations, Bureau of Plant Industry. Pp. 11, figs. 12. Dec. 14, 1914. (B. P. I. No. 1130.) Price, 5 cents.

This paper is of interest to cotton growers in all sections of the United States.

FARMERS' BULLETINS.

Winter Wheat Varieties for the Eastern United States. By Clyde E. Leighty, Agronomist in Charge of Eastern Wheat Investigations. Pp. 14, figs. 6. Contribution from the Bureau of Plant Industry. Dec. 12, 1914. (Farmers' Bulletin 616.)

Of interest in the wheat-growing sections of the eastern United States.

How to Attract Birds in Northeastern United States. By W. L. McAtee, Assistant Biologist. Pp. 15, figs. 11. Contribution from the Bureau of Biological Survey. Dec. 14, 1914. (Farmers' Bulletin 621.)

Means of providing a food supply for wild birds about the homestead are especially described in this bulletin.

Basket Willow Culture. By George N. Lamb, Scientific Assistant, Forest Service. Pp. 34, figs. 24. Contribution from the Forest Service. Dec. 10, 1914. (Farmers' Bulletin 622.)

This bulletin is of interest to those engaged in or contemplating basket-willow culture, and is applicable to all portions of the country where willows are grown.

Cotton Wilt and Root-Knot. By W. W. Gilbert, Pathologist, Office of Cotton and Truck Disease and Sugar-Plant Investigations. Pp. 21, figs. 15. Contribution from the Bureau of Plant Industry. Dec. 12, 1914. (Farmers' Bulletin 625.)

Contains description of cotton wilt and root-knot and methods of prevention.

The Carpet Beetle or "Buffalo Moth." By L. O. Howard, Entomologist and Chief of Bureau. Pp. 4, fig. 1. Contribution from the Bureau of Entomology. Dec. 2, 1914. (Farmers' Bulletin 626.)

This bulletin is of interest to housewives in the Northern States.

The House Centipede. By C. L. Marlatt, Entomologist and Assistant Chief of Bureau. Pp. 4, figs. 2. Contribution from the Bureau of Entomology. Dec. 15, 1914. (Farmers' Bulletin 627.)

This bulletin is of interest to housewives throughout the United States. It is a reprint of Bureau of Entomology Circular 48.

Growing Peaches: Varieties and Classification. By H. P. Gould, Pomologist in Charge of Fruit Production Investigations, Office of Horticultural and Pomological Investigations. Pp. 13. Contribution from the Bureau of Plant Industry. Dec. 30, 1914. (Farmers' Bulletin 633.)

This bulletin is intended for general distribution.

The Larger Corn Stalk-Borer. By George G. Ainslie, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 8, figs. 4. Contribution from the Bureau of Entomology. Dec. 7, 1914. (Farmers' Bulletin 634.)

Gives description and habits of, and methods of control of the larger corn stalk-borer. Of especial interest to farmers in the Southern States.

What the Farm Contributes Directly to the Farmers' Living. By W. C. Funk, Scientific Assistant, Office of Farm Management. Pp. 21, fig. 1. Contribution from the Bureau of Plant Industry. Dec. 24, 1914. (Farmers' Bulletin 635.)

This bulletin gives the results of studies to determine the indirect income furnished by the farm to the farmers' family; it is particularly applicable to the region east of the Rocky Mountains.

The Chalcis-fly in Alfalfa Seed. By Theodore D. Urbahns, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 10, figs. 10. Contribution from the Bureau of Entomology. Dec. 31, 1914. (Farmers' Bulletin 636.)

This bulletin furnishes a general knowledge of the chalcis-fly, an insect injurious to alfalfa seed, and contains several practical methods for its control.

Eradication of the Cattle Tick Necessary for Profitable Dairying. By J. H. McClain, Dairy Division. Pp. 4, figs. 2. Contribution from the Bureau of Animal Industry. Dec. 19, 1914. (Farmers' Bulletin 639.)

Experiments showing that cows carrying ticks did not hold up so well in milk flow as the cows kept free from ticks and did not increase their flow of milk when the feed was increased, as did the tick-free cows.

The Agricultural Outlook. Contribution from the Bureau of Crop Estimates. Dec. 31, 1914. Pp. 45, fig. 1. (Farmers' Bulletin 645.)

Contents: Yearly crop summary, 1914.—Winter wheat and rye sowings and condition.—The Apple crop.—Forecasts of average sugar and cane yields in Louisiana, 1914.—Florida and California crop report.—Trend of prices of farm products.—Agricultural products shipped into cotton States.—Cold-storage holdings of apples.—The wheat crop of the southern hemisphere.—Acreage, yield per acre, production, prices, and total value of principal crops, 1914, and acreage and condition of winter wheat and rye (tables).—Prices of farm products (tables).

SPECIAL CIRCULARS.

By direction of the Secretary the following "Special Circulars" have been prepared in certain bureaus for distribution among farmers in the cotton belt who desire to diversify their farming operations:

By the Bureau of Animal Industry:

- Feeding Farm Cows in the South.
- Advantages of Dairying in the South.
- The Feeding and Care of Dairy Calves.
- Marketing Butter and Cream in the South.
- How Southern Farmers May Get a Start in Pig Raising.
- Horse and Mule Raising in the South.
- Producing Sheep on Southern Farms.
- Suggestions on Poultry Raising for the Southern Farmer.
- Making Farm Butter in the South.
- Shall Southern Farmers Build Creameries?
- Do You Keep a Cow?
- The Production and Care of Milk and Cream.
- Conveniences for Handling the Farm Cow and Her Products.

By the Bureau of Plant Industry:

- Permanent Pastures for the Cotton Belt.
- Sorghum for Forage in the Cotton Belt.
- Rye in the Cotton Belt.
- Winter Wheat in the Cotton Belt.
- Winter Oats in the Cotton Belt.
- Rape as a Forage Crop in the Cotton Belt.
- Hairy Vetch for the Cotton Belt.
- Soy Bean in the Cotton Belt.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weather and Crop Bulletin, December, 1914, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.) Price, 25 cents a year.

Snow and Ice Bulletins for December 8, 15, 22, 29, 1914. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

Jos. A. ARNOLD,
Editor and Chief Division of Publications.